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In response to GN Docket No. 09-51, Approach to Developing the National Broadband Plan, the Arizona Consumers Council offers its recommendations, indicated in red text in the 'III Discussion' section.

The Arizona Consumers Council mission statement is provided at the end of this document.

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TABLE OF CONTENTS

| | Paragraph |
|---|-----------|
| I. INTRODUCTION | 2 |
| II. BACKGROUND | 10 |
| III. DISCUSSION | 12 |
| A. APPROACH TO DEVELOPING THE NATIONAL BROADBAND PLAN | 13 |
| B. ESTABLISHING GOALS AND BENCHMARKS | 15 |
| 1. DEFINING BROADBAND CAPABILITY | 16 |
| 2. DEFINING ACCESS TO BROADBAND | 24 |
| 3. MEASURING PROGRESS | 30 |
| 4. ROLE OF MARKET ANALYSIS | 36 |
| C. EFFECTIVE AND EFFICIENT MECHANISMS FOR ENSURING ACCESS | 37 |
| 1. MARKET MECHANISMS | 38 |
| 2. DETERMINING COSTS | 39 |
| 3. UNIVERSAL SERVICE PROGRAMS | 40 |
| 4. WIRELESS SERVICE POLICIES | 43 |
| 5. OPEN NETWORKS | 48 |
| 6. COMPETITION | 50 |
| 7. OTHER MECHANISMS | 51 |
| D. AFFORDABILITY AND MAXIMUM UTILIZATION | 53 |
| 1. AFFORDABILITY | 55 |
| 2. MAXIMUM UTILIZATION | 56 |
| 3. BROADBAND PRIVACY | 59 |
| E. STATUS OF DEPLOYMENT | 62 |
| 1. SUBSCRIBERSHIP DATA AND MAPPING | 62 |
| 2. STIMULUS GRANT AND LOAN PROGRAMS | 63 |
| F. SPECIFIC POLICY GOALS OF THE NATIONAL BROADBAND PLAN | 64 |

| | |
|---|-----|
| 1. ADVANCING CONSUMER WELFARE | 65 |
| 2. CIVIC PARTICIPATION | 71 |
| 3. PUBLIC SAFETY AND HOMELAND SECURITY | 73 |
| 4. COMMUNITY DEVELOPMENT | 81 |
| 5. HEALTH CARE DELIVERY | 82 |
| 6. Energy Independence and Efficiency | 87 |
| 7. Education | 89 |
| 8. Worker Training | 95 |
| 9. Private Sector Investment | 96 |
| 10. Entrepreneurial Activity | 99 |
| 11. Job Creation and Economic Growth | 103 |
| 12. Other National Purposes | 105 |
| G. Relationship between the Recovery Act and Other Statutory Provisions | 107 |
| H. Improving Government Performance and Coordination with Stakeholders | 113 |
| IV. CONCLUSION | 124 |

I. INTRODUCTION

1. This Notice of Inquiry seeks comment to inform the development of a national broadband plan for our country. Its focus is to enable the build-out and utilization of high-speed broadband infrastructure. But “infrastructure” barely hints at the importance of what we are undertaking. High-speed ubiquitous broadband can help to restore America’s economic well-being and open the doors of opportunity for more Americans, no matter who they are, where they live, or the particular circumstances of their lives. It is technology that intersects with just about every great challenge facing our nation.

2. In the forty years since ARPANET first connected four academic research labs in 1969, the Internet has transformed the way those who have access to it live their lives.¹ Indeed, since the last major revision of the Communications Act² in 1996 in which the Internet was mentioned only briefly, the Internet has become an integral part not only of American life, but of global life. In 1996, Americans who accessed the Internet did so largely through dial-up connections. A small percentage of the population subscribed to cell phone service. Cable was a locally-regulated video delivery platform; satellite-to-the-home and the World Wide Web were in their infancy. Today, the majority of U.S. businesses and households have broadband connections, and access to the Internet through a variety of technologies – fiber, copper, cable, wireless, and satellite³ – is an integral and critical part of American life.

3. Both wireless and wireline broadband providers continue to upgrade their networks to provide additional broadband capabilities and services to existing and potential consumers. However, there is much work to be done. While Internet access – whether provided

¹ ARPANET is an acronym for Advanced Research Projects Agency Network, which was the world’s first operational packet switching network and the predecessor of the global Internet, developed by the Advanced Research Projects Agency at the United States Department of Defense. *See* Kevin Werbach, *Digital Tornado: The Internet and Telecommunications Policy*, Office of Plans and Policy Working Paper Series 29, 15 (1997).

² Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996 Act) (amending the Communications Act of 1934).

³ Consumers use a variety of broadband access service technologies to access the Internet. *See Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, GN Docket No. 07-45, Fifth Report, 23 FCC Rcd 9615 (2008) (*Section 706 Fifth Report*).

by wireline, wireless, or satellite technology – is now available at faster speeds, in more locations, and on smaller, easier-to-use devices, its benefits are not yet ubiquitous.

4. New, innovative broadband products and applications – whether provided by wireline, wireless, or satellite technology – are fundamentally changing not only the way Americans communicate and work, but also how they are educated and entertained, and care for themselves and each other. Individuals increasingly take advantage of broadband today for everyday communications with family and friends, sharing files with co-workers when away from the office, uploading videos and photos, collaborating on articles, blogging about local happenings and world events, creating new jobs and businesses, finding nearby restaurants, shopping, banking, interacting with government, getting news and information when on the go, communicating through relay services, and countless additional applications.

5. While all of these developments are encouraging, we have not yet met the challenge of bringing broadband to everyone.⁴ Nor have we managed to keep up with the growing demand for faster and more reliable connections for those who have only basic access now. Many of us, even most of us, have access to broadband. Our goal must be for every American citizen and every American business to have access to robust broadband services. Our goal must be for the United States to be a model for the world in creating a partnership between government and industry to ensure that all citizens have access to broadband. But a goal without a plan is just a wish.⁵

6. In the recently passed American Recovery and Reinvestment Act of 2009,⁶ the “stimulus” legislation, Congress charged the Department of Agriculture’s Rural Utilities Service and the Department of Commerce’s National Telecommunications and Information Administration with making grants and loans to expand broadband deployment and for other important broadband projects. Congress provided \$7.2 billion for this effort—no small sum. But even this level of funding is insufficient to support nationwide broadband deployment. With this realization, the Recovery Act charges the Commission to create a national broadband plan. By February 17, 2010, the Commission must and will deliver to Congress a national broadband plan that seeks to ensure that every American has access to broadband capability and establishes clear benchmarks for meeting that goal.

7. We recognize that achieving this goal requires the wholehearted effort of both the private and the public sector. Coupling the dynamic innovations and flexibility of the private sector with the far-seeing policy goals of the public sector can help our nation achieve its broadband goals more efficiently and effectively than either could achieve alone.

8. We seek comment in this Notice from all interested parties on the elements that should go into a national broadband plan. Our plan must reflect an understanding of the problem, clear goals for the future, a route to those goals, and benchmarks along the way. Our plan must also allow for modification as we learn from our experience. And our plan must reflect the input

⁴ Some surveys indicate that the United States lags far behind in broadband speed and penetration. *See, e.g.,* Organization for Economic Cooperation and Development, Broadband Growth and Policies in OECD Countries (2008), *available at* <http://www.oecd.org/sti/ict/broadband> (ranking the United States as 14th in the world in average download speed, 15th in the world in broadband penetration, and 18th in the world in price per megabit per second download speed). The Commission recently sought comment on international comparisons in a separate proceeding. *See Comment Sought on International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act*, GN Docket No. 09-47, Public Notice, DA 09-741 (rel. Mar. 31, 2009).

⁵ Many attribute this quotation to Antoine de Saint-Exupéry. *See* <http://www.quotationspage.com/quote/34212.html> *but see* Anonymous quotation in PREPARING: WEBSTER’S QUOTATIONS, FACTS AND PHRASES 7 (2001).

⁶ American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (2009) (Recovery Act). The Recovery Act was signed into law on February 17, 2009.

of all stakeholders—industry, American consumers; large and small businesses; federal, state, local, and tribal governments; non-profits; and disabilities communities. With this Notice, we begin to make our plan.

II. BACKGROUND

9. We provide a brief overview here and at length in the attached appendix of recent legislation concerning broadband deployment, mapping and future planning.⁷ This legislation includes the Recovery Act, which provides up to \$7.2 billion in broadband stimulus funds to develop and expand broadband in order to facilitate economic development. The Recovery Act also tasks the Commission with developing a national broadband plan by February 17, 2010. By Congress’s direction, this plan shall seek to ensure that all people of the United States have access to broadband capability and shall establish benchmarks for meeting that goal.⁸ The Recovery Act specifies that the Commission’s plan must include an analysis of several specific elements of broadband deployment. First, the Commission must analyze the most effective and efficient mechanisms for ensuring broadband access by all people of the United States. Second, the Commission must include a detailed strategy for achieving affordability of such service and maximum utilization of broadband infrastructure and service by the public. Third, the Commission must include an evaluation of the status of deployment of broadband service, including progress of projects supported by the grants made pursuant to this section. Finally, the Commission must include a plan for use of broadband infrastructure and services in advancing a broad array of public interest goals, including consumer welfare, civic participation, public safety and homeland security, community development, health care delivery, energy independence and efficiency, education, worker training, private sector investment, entrepreneurial activity, job creation and economic growth, and other national purposes.

10. Recent legislation also includes the 2008 Farm Bill, which calls for a comprehensive rural broadband strategy and interagency response, and the Broadband Data Improvement Act of 2008, which focuses on data collection that will identify areas still unserved and provide insights on consumer needs related to broadband. A separate background appendix also provides a brief outline of the Commission’s efforts to date to expand broadband availability through universal service policies, to make spectrum available for wireless broadband services, and to improve broadband data collection.⁹

III. DISCUSSION

11. In this section, we describe our approach to developing this plan and request comment on key terms of the statute. We also discuss a number of specific policy goals outlined for the plan in the Recovery Act and how the various governmental agencies and other participants at all levels can best coordinate to achieve these goals.

A. Approach to Developing the National Broadband Plan

12. The Recovery Act states that “[n]ot later than 1 year after the date of enactment of this section, the Commission shall submit to the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate, a report containing a national broadband plan.”¹⁰ In creating a national broadband plan, we ask, ultimately, how the Commission can identify and promote the best and most efficient means of achieving this congressional mandate.

(III 12., The Commission must look at the gaps in the system, which areas are unserved

⁷ See *infra* Appendix.

⁸ Recovery Act § 6001(k)(2).

⁹ See *infra* Appendix.

¹⁰ Recovery Act § 6001(k)(1).

and/or underserved and work with providers and or states and non-profits to fill the gaps. The Commission must be proactive in insuring that all citizens have equal access at prices they can afford.)

13. As we consider this task, we keep in mind and follow the instruction Congress provided to the Commission in the Recovery Act and seek comment on each element of the instruction. First, we seek comment on how to implement a plan “to ensure that all people of the United States have access to broadband capability,” including how to address the Congressional directive to “establish benchmarks for meeting that goal.”¹¹ How should broadband capability be defined going forward, and what does it mean to have access to it? Second, we seek comment on how to provide “an analysis of the most effective and efficient mechanisms for ensuring broadband access by all people of the United States.”¹² Third, we seek comment on how to develop “a detailed strategy for achieving affordability of such service and maximum utilization of broadband infrastructure and service by the public.”¹³ Fourth, we ask about how the Commission should evaluate “the status of deployment of broadband service, including progress of projects supported by the grants made pursuant to this section.”¹⁴ Fifth, we seek comment on how to develop “a plan for use of broadband infrastructure and services in advancing” a variety of policy goals.¹⁵ We also seek comment on how we should evaluate the development of a national broadband plan in light of a variety of other related statutory directives and whether additional elements should be included in the national broadband plan. Finally, because this plan will not be solely the Commission’s to implement, we seek comment on how the Commission, in both the development and implementation of a national broadband plan, should work collaboratively with other agencies at all levels of government, with consumers, with the private sector, and with other organizations.¹⁶ (III 13., 1. Going forward the Commission must try to anticipate what new developments in broadband will take place over the next 5 years and be prepared to support changes that are necessary to support these new initiatives. There should be an ongoing dialog with stakeholders on a state and regional basis to identify what changes will be necessary. 2. Ongoing mapping of who is connected to broadband and identify reasons why some are left out. Mechanisms need to be identifies which will bring all on board. 3. Affordability means different things to each individual. The cost for broadband depends upon affordability. The Commission must be prepared to subsidize some and/or charge prices that all can afford. 4. The Commission must establish an ongoing evaluation to assess progress in meeting this goal. 5. There must be a commitment on the part of the Commission to develop structures to insure maximum participation.)

B. Establishing Goals and Benchmarks

14. In this subsection, we seek comment on how to implement a plan “to ensure that all people of the United States have access to broadband capability,” including how to address the

¹¹ Recovery Act § 6001(k)(2).

¹² Recovery Act § 6001(k)(2)(A).

¹³ Recovery Act § 6001(k)(2)(B).

¹⁴ Recovery Act § 6001(k)(2)(C).

¹⁵ Recovery Act § 6001(k)(2)(D). Specifically, the national broadband plan must include “a plan for use of broadband infrastructure and services in advancing consumer welfare, civic participation, public safety and homeland security, community development, health care delivery, energy independence and efficiency, education, worker training, private sector investment, entrepreneurial activity, job creation and economic growth, and other national purposes.” *Id.*

¹⁶ See Recovery Act § 6001(k)(3) (“In developing the plan, the Commission shall have access to data provided to other Government agencies under the Broadband Data Improvement Act (47 U.S.C. 1301 note)”).

interrelated Congressional directive to “establish benchmarks for meeting that goal.”¹⁷ (III 14., Utilizing the Telecommunication Act 1936 as a possible template, the Commission can order the build out of the network or work with providers to insure that the build out is total. Subsidies may be required or government could do the infrastructure build out and change wholesale rates to use the infrastructure.)

1. Defining Broadband Capability

15. Broadband can be defined in myriad ways. In order to ensure that all people of the United States have access to broadband capability, we must make sure that the Commission appropriately identifies goals and benchmarks in this regard. Here, we seek comment on how the Commission should define “broadband capability.”¹⁸ In the discussion below, we seek comment on how this definition should capture the various issues we should consider as we define broadband capability, including how to take into account the various existing and emerging technologies. (III 15., Broadband capability is a moving target. The Commission must be forward looking in trying to identify new technologies and uses so that in 5 years when the system is build it is not static.)

16. For instance, the Commission currently uses the terms “advanced telecommunications capability,”¹⁹ “broadband,” and “high-speed Internet.”²⁰ Should these definitions be unified, or should they have separate meanings for different purposes, keeping in mind that current and future broadband platforms will increasingly support “high-speed Internet” as one of several offered services including voice, video, private data applications, and the like? In addition, to the extent that broadband is defined by “speed,” should the Commission consider raising the speeds that define broadband? Should we distinguish among the various broadband technologies? Are there specific Commission actions that could encourage more rapid adoption of these more advanced broadband deployments using mobile wireless technologies, such as Worldwide Interoperability for Microwave Access (WiMAX), Long Term Evolution (LTE), or wireline broadband deployments, such as fiber, DSL, or coaxial deployments supporting DOCSIS 3.0, for example? Are there other advanced broadband technologies that, if deployed, might better position the nation’s broadband infrastructure for continued evolution? (III 16., “Additional Telecommunications capability”, “Broadband”, and “high speed internet should be unified, but must be flexible enough as to take into consideration new and emerging technologies and applications. Speed is always a moving target as use of technologies and uses change while utilizing more bandwidth and speed.)

17. We also seek comment on whether a definition of “broadband” should be tethered to a numerical definition or, instead, an “experiential” metric based on the consumer’s ability to access sufficiently robust data for certain identifiable broadband services. In this regard, should we define broadband in terms of bandwidth and latency, capability to download a certain type of media in a certain amount of time, ability to access a certain online service or operate a certain application without depreciation in quality, or by some other metric? Furthermore, should such performance metrics apply only for the local access link, for the end-to-end path, or some other portion of the network? To what extent should our consideration of access to broadband capability take account of the middle mile? Much of the focus on broadband deployment has been on last mile connections. Is there a need, for instance in rural areas, for a

¹⁷ Recovery Act § 6001(k)(2).

¹⁸ Recovery Act § 6001(k)(2).

¹⁹ We note that Section 706 of the 1996 Act states, “The term ‘advanced telecommunications capability’ is defined, without regard to any transmission media or technology, as high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology.” 47 U.S.C. § 157 nt (d).

²⁰ Section 706 Fifth Report, 23 FCC Rcd at 9716, para. 2.

greater focus on broadband capabilities in the network beyond last-mile connections? How robust are broadband capabilities in backbone and feeder networks throughout the country? (III 17., Total numerical definitions are usually outdated before the approval process is complete. Utilizing “experiential” metrics based on usage and ability to access data, etc is essential. In rural areas, middle mile access is critical to access to the network. Last mile can usually, but not always, be attained if there is a minimum of subscribers using the network. Those areas with insufficient subscribership will have to have some kind of subsidy to the subscriber or the provider.)

18. We also request comment on whether a definition of broadband should be static or dynamic, with speed tiers that adjust with changes in technology.²¹ Further, we seek comment on the definitions for broadband used by other government agencies and how any such definition by the Commission would impact the various government programs designed to improve consumers’ access to or use of broadband services. For example, should the Commission define broadband in the same manner as other agencies charged with implementing parts of the Recovery Act? We also seek comment on any definitions for “broadband” used in other nations or international organizations that may be useful to the Commission in this proceeding. (III 18., Developing tiers for defining broadband accessibility even if dynamic, can lead to segmentation of the market. Such segmentation can lead to high prices for those least able to afford services. Regulators can be faced with large subsidies for many to stay on the network.)

19. Because a range of technologies may be used to provide broadband services in a variety of situations,²² we seek comment on whether to adopt different definitions or standards of what constitutes broadband based on the technology being used to provide the service or the context in which the service is applied, or some combination of both. For instance, should a different set of standards be used to identify mobile broadband services – which allow mobility or portability but may have lower throughputs – and fixed broadband services? Should the definitions vary depending on whether the broadband service is used to serve residential or business customers and if so, how? Should rural regions, with their inherently higher deployment costs, have different definitions or standards for broadband than urban areas? How should satellite technology with comparatively limited bandwidth and higher latency but potentially lower cost of deployment in rural regions be accounted for? Should our definition include some baseline dependability metric? Are there other dependability concerns, such as susceptibility to weather disruptions, that need to be addressed now or in the future? (III 19., Standards must be developed to insure equality across the spectrum. Exceptions should be taken into consideration based on the availability of technology. We should strive to develop technologies that will avail all areas essentially equal access.)

20. In shared bandwidth broadband access technologies, how should actual speed

²¹ The Commission sought comment on a dynamic definition of broadband in 2007, but ultimately did not adopt this type of definition in the 2008 *Data Gathering Order*. See *Deployment of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscribership Data, and Development of Data on Interconnected Voice over Internet Protocol (VoIP) Subscribership*, WC Docket No. 07-38, Notice of Proposed Rulemaking, 22 FCC Rcd 7760, 7769-70, paras. 20-21 (2007) (2007 *Data Gathering Notice*); *Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscribership Data, and Development of Data on Interconnected Voice over Internet Protocol (VoIP) Subscribership*, WC Docket No. 07-38, Report and Order and Further Notice of Proposed Rulemaking, 23 FCC Rcd 9691, 9702, para. 22 (2008) (2008 *Data Gathering Order*).

²² Wireless broadband deployments could include Advanced Wireless Service (AWS), Broadband Radio Service (BRS), PCS, WiFi, UNII, TV White Spaces Devices, etc. that use technologies, such as Worldwide Interoperability for Microwave Access (WiMAX) or Long Term Evolution (LTE), HSPA, EVDO, etc., and wireline broadband deployments could include fiber, DSL, or coaxial deployments supporting DOCSIS 3.0, for example.

delivered to consumers be determined, taking into account that for wireline systems, frequency bandwidth, the number of simultaneous users, and distance to the end user affect the data rates delivered? In addition to the bandwidth and number of simultaneous users, the data rates delivered to wireless end users depend upon, among other factors, transmitter power, frequency re-use, and the distance between the end user and the base station. More specifically for actual speeds on a wireless network, should they be determined at the edge of the service contour, and if so, what service contour level would define the edge of service? To what extent should the number of simultaneous users be considered when defining the individual end user data rates since the network capacity may be shared with many other users at the local level? In general, how should the speeds and other characteristics of services delivered to consumers be determined? (III 20., Generally speed of delivery will be determined by the technology that is being used. The goal should be to create a methodology in which the highest speeds are available for individual usage. It appears that for the future multiple users will a very little difficulty in accessing any speed necessary.)

21. We also recognize that broadband services are provided under our provisions for the operation of unlicensed radio transmitters.²³ For example, Wi-Fi hotspots provide access to broadband service at hundreds of thousands of locations throughout the United States and the world at locations such as airports, hotels, coffee shops, and retail establishments. Unlicensed technologies are often used by Wireless Internet Service Providers (WISPs) to offer broadband service in urban, suburban and rural communities.²⁴ Unlicensed technologies are increasingly incorporated in devices operating under our licensed radio services rules to enhance consumers' broadband experience, such as cell phones that include Wi-Fi broadband access capability. We also note that the Commission recently established provisions for unlicensed devices to operate in the TV white spaces, which hold promise for the introduction of new broadband services.²⁵ In addition, the Commission has established rules to provide for broadband over power line service where the electrical distribution grid can be used for delivery of broadband services.²⁶ We invite comment as to the state of deployment of broadband services that are offered under our rules for unlicensed devices. Should they be considered as a means of providing broadband service, particularly where no other service exists? If so, how should that service be defined or quantified since unlicensed devices are not necessarily associated with specific areas of operation? We note that unlicensed devices operate on a non-interference basis and must share spectrum with all other such devices. Accordingly, a particular quality of service or data speed often cannot be assured. Should we treat data speeds and metrics for unlicensed devices and services differently because the sharing scenarios and their impact on reliability and data speeds are difficult to predict? (III 21., New technologies will determine future use of these spectrums. The Commission should monitor these but not act further unless and until issues evolve.)

22. With technology developing at such a rapid pace, it is important that we do not lose sight of the potential for monumental shifts in technological platforms that would render definitions obsolete or indeed harmful to developments that might otherwise take place in the market. We thus seek comment on how potential definitions that we apply in furtherance of a national broadband plan can be effectively designed, *i.e.*, appropriately focused to achieve important social goals but sufficiently flexible to adapt to a continuously and rapidly changing technological environment. (III 22., The Commission needs to monitor and be flexible enough to meet the challenges of these new technologies. Ongoing communications among stakeholders to review and act when new issues come up will put the Commission in a better position in the

²³ See 47 C.F.R. Part 15.

²⁴ See www.WISPA.org and www.Part-15.org for information on broadband services deployed by WISPs.

²⁵ See *Unlicensed Operation in the TV Broadcast Bands*, ET Docket 04-186, Second Report and Order and Memorandum Opinion and Order, 23 FCC Rcd 16807 (2008).

²⁶ See 47 C.F.R. Part 15, Subpart G.

ongoing debate and possible regulation.)

2. Defining Access to Broadband

23. The Recovery Act sets a goal for the national broadband plan of seeking “to ensure that all people of the United States *have access* to broadband capability.”²⁷ We seek comment on what it means to have access to broadband capability. For instance, we seek comment on whether our determination of availability should take into consideration the provision of broadband at locations, such as at home, at work, in schools, in transit, in libraries and other similar community centers, and at public Wi-Fi hotspots. Further, we seek comment on how to interpret this term regarding access for businesses and other non-residential entities, including those that may serve as anchor tenants in a community. We also seek comment on whether to interpret the term differently depending on the technology used or whether it is used in a fixed, nomadic, or mobile context. Further, we seek comment on any similar definitions of access to broadband used by other nations or international organizations that may be useful to the Commission in this proceeding. (III 23., Access means the ability to go on to the network a reasonable cost to those who wish to utilize the technology. It is currently assumed that such access is now available through work, school, libraries, etc. Federal and state programs are in place to help fill out the present gaps or will be once the present underserved and unserved areas are completed. The question remains with homes and the purchase to computers, etc. to access the network from home. The Commission must insure that the network is assessable to all from home to all those who wish to utilize it)

24. We seek comment on whether (and if so, how) the Commission should evaluate the term “access” with certain basic consumer expectations in mind. In 2005 the Commission adopted an *Internet Policy Statement* in which it committed “to preserve and promote the vibrant and open character of the Internet as the telecommunications marketplace enters the broadband age” by incorporating four consumer-based principles into its ongoing policymaking activities.²⁸ We seek comment on whether, in developing a national broadband plan, we should consider applying these principles more broadly in light of the evolving ways providers store, distribute, and otherwise provide service via broadband access facilities, particularly in ways that are not carried over the Internet. We ask if these principles require elaboration or explanation in light of the telecommunications environment that has evolved since their adoption, and whether the Commission should turn the principles into rules through a rulemaking. We ask, too, that commenters describe the relevant distinctions between the technical capabilities of the broadband connectivity and the source and nature of the services made available via broadband. Overall, we seek comment on how the Commission should develop a national broadband plan in light of these policies.²⁹ (III 24., The policy articulated above should be turned into rules if the network providers do or cannot comply with the intent of the policy. The Commission needs to monitor the providers and network managers to insure that these policies are carried out. The openness of the network must work for all segments of the community so as to insure privacy of information

²⁷ Recovery Act § 6001(k)(2) (emphasis added).

²⁸ “To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet” the Commission established the following four policies: (1) “consumers are entitled to access the lawful Internet content of their choice”; (2) “consumers are entitled to run applications and use services of their choice, subject to the needs of law enforcement”; (3) “consumers are entitled to connect their choice of legal devices that do not harm the network”; and (4) “consumers are entitled to competition among network providers, application and service providers, and content providers.” *Internet Policy Statement*, 20 FCC Rcd 14986, 14987-88, para. 4 (2005). The extent to which the principles in the Internet Policy Statement apply to wireless service providers is currently before the Commission in the Skype proceeding. See Petition of Skype Communications S.A.R.L. to Confirm a Consumer’s Right to Use Internet Communications Software and Attach Devices to Wireless Networks, RM-11361, filed February 20, 2007.

²⁹ See *infra* Section III.C.5 (discussing open network policies).

and control that remains with the consumer.)

25. To what extent should the Commission consider price or marketplace competition for broadband as it considers whether people have access to broadband capability? For example, how should the Commission consider the benefits of consumers in a particular area having only a single provider, using one type of technology, versus the competitive benefits that could result from having one or more providers using similar or different technologies? How should the national broadband plan establish priorities for unserved areas versus areas with limited competition and capability? (III 25., The Commission may need to regulate and subsidize those parts of the network in which competition cannot be achieved. Having a single provider or even a duopoly will not insure a competitive market if there are not enough subscribers to insure competition. The Commission must also determine what prices can be charge for access in the absence to true competition.)

26. What benefits to consumers are unique to different broadband technologies? How should the Commission consider the different qualitative features discussed above in the definition of broadband, such as latency, peak download speed, and mobility? What metric should be used to define wireless access? For instance would an end user have access if located within a particular service contour? Or would it be based on measured data rates at the end user location? Should the Commission consider access to wireless broadband from satellite or cellular providers in areas that are not served by wireline systems differently from areas where wireline services are available? Moreover, how should the Commission view the price constraining and substitutability relationships between various fixed wireline services and between fixed wireline services and fixed or mobile wireless services, including both terrestrial and satellite services? How would speed definitions and other regulations attached to grants, loans and universal service distributions affect affordability and pricing of services? (III 26., These are technical questions. Suffice to say that all technologies must be interoperable. The technology utilized will depend upon a number of different factors such as terrain, number of subscribers, access to middle mile, etc. Whatever technology is used, its cost and price of its service must be looked at in light of the entire network.)

27. We also seek comment on the extent to which access hinges on affordability.³⁰ For instance, how should the Commission consider broadband services fully deployed to an area, but set at a subscription cost that is unaffordable to some or many residents of the area? Commenters should discuss other distinctions that may be relevant and should be taken into consideration in developing a national broadband plan. (III 27., Affordability is the primary mover in determining access assuming the infrastructure is in place. This is especially true in underserved areas where technology exists but the prices charged are unaffordable. Using telephone wireline as an example: this nation achieved a 92% penetration rate phones in the home. Although it led to many problems and almost 10% of the nation without a home phone, it was remarkably successful at reaching the public. The Commission needs to pursue many avenues as well a commitment to put all on line in this new technological age.)

28. *Access for People with Disabilities.* We seek comment on what it means for a person with disabilities to “have access” to broadband capabilities.³¹ Both Congress and the

³⁰ See *infra* para. 54 (discussing affordability).

³¹ See generally 47 U.S.C. § 255; see also *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*; *Universal Service Obligations of Broadband Providers*; *Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services*; *Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services*; *1998 Biennial Regulatory Review – Review of Computer III and ONA Safeguards and Requirements*; *Conditional Petition of the Verizon Telephone Companies for Forbearance Under 47 U.S.C. § 160(c) with Regard to Broadband Services Provided Via Fiber to the Premises*; *Petition of the Verizon Telephone Companies for Declaratory Ruling or, Alternatively, for Interim Waiver with Regard to Broadband Services Provided Via Fiber to the Premises*; *Consumer Protection in the Broadband Era*, CC Docket Nos. 02-33, 95-20, 98-10, 01-337, WC

(continued....)

Commission have understood the tremendous value that broadband networks can bring to improving communications with and among people with disabilities and bringing opportunities to them.³² We also seek comment on how broadband services, including, for example, Internet-based telecommunications relay services, have a positive impact on the ability to communicate for persons with disabilities, as well as how the needs of people with disabilities should be included in the national broadband plan.³³ For example, we seek comment on whether, and if so, how, to ensure that the technical characteristics of current and future broadband networks align with the needs of disabled citizens. (III 28., The Commission must be committed to the Americans for Disability Act its full implementation in the new technological arena. The Commission needs to be committed to develop new technologies in this area. It needs to work with developers and providers to insure that the latest and most advanced technologies are implement at reasonable costs.)

3. Measuring Progress

29. In order to develop a national broadband plan, we need up-to-date and complete information on existing broadband deployment and possible future deployments. The Commission collects a variety of information regarding broadband subscribership.³⁴ We seek comment on how the Commission's existing data collections, as well as ones that we could undertake, can play a role in measuring our nation's progress toward the goal of ensuring that all Americans have access to broadband. Specifically, we seek comment on which metrics the Commission should use to measure progress and how such metrics capture the variety of communities and technologies across the nation. Further, we seek comment on how the information collected from consumers based on the periodic consumer surveys may assist the Commission in establishing or measuring progress.³⁵ (III 29., The proposed mapping project envisioned by the Commission can be the starting point in determining what has been deployed. The Commission could set up categories such as homeowners and renters, businesses, non-profits, government and other public entities. Contacts could be made on a granular level to determine if broadband is available, is accessible and why and then set out in its grant and loan programs through the Recovery Act where to place the dollars to bring broadband to the nation.

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Docket Nos. 04-242, 05-271, Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 14853 (2005) *aff'd Time Warner Telecom, Inc. v. FCC*, 507 F.3d 205 (3d Cir. 2007) (*Wireline Broadband Order or Consumer Protection in the Broadband Era NPRM*); *Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks*, WT Docket No. 07-53, Declaratory Ruling, 22 FCC Rcd 5901 (2007).

³² See, e.g., The Assistive Technologies Act of 2004, Pub. L. No. 108-364, 118 Stat. 1707 (2004) (codified at 29 U.S.C. §§ 3001-07) (supporting state efforts to improve provision of assistive technology to individuals with disabilities); The Americans with Disabilities Act of 1990, Pub. L. No. 101-336, 104 Stat. 327, Title IV (1990) (codified at 47 U.S.C. § 225) (requiring common carriers to provide telecommunications relay services for deaf and speech-impaired individuals); *Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets*; *Petition of American National Standards Institute Accredited Standards Committee C63 (EMC) ANSI ASC C63®*, WT Docket No. 07-250, First Report and Order, 23 FCC Rcd 3406 (2008) (adopting hearing aid compatibility requirements for mobile wireless devices); 47 C.F.R. § 64.601-06 (Commission's telecommunications relay service rules).

³³ See, e.g., *Provision of Improved Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*; *Petition for Clarification of WorldCom, Inc.*, CC Docket No. 98-67, Declaratory Ruling and Second Further Notice of Proposed Rulemaking, 17 FCC Rcd 7779, 7781-82, paras. 7-9 (2002) (describing the benefits of IP Relay).

³⁴ See *infra* App., paras. **Error! Reference source not found.-Error! Reference source not found.** (describing the Commission's broadband data collection).

³⁵ Broadband Data Improvement Act of 2008, Pub. L. No. 110-385, 122 Stat. 4096 § 103(c) (2008) (BDIA).

The Commission must also determine if price is a problem of access how to insure that those who cannot afford current prices can go online.)

30. We seek comment on the interrelationship between the various reporting obligations the Commission is tasked with under the BDIA and the NTIA and RUS grant projects. How well do these varied reporting obligations mesh and what revisions might be appropriate? For example, as we consider how to measure progress in the United States, how should we consider the comparative analyses of international broadband required by the BDIA?³⁶ (III 30., The Commission need to sit down with the organizations under BIDA, NTIA, RUS as well as other stakeholders and develop a single set of reporting obligations which will include all parties. All must be on the same page and have access to the same data.)

31. What can the Commission learn from the efforts of other countries as it develops a national broadband plan? Have other nations developed similar plans or other programs that assist them in measuring broadband deployment that could inform our development of a national broadband plan? How have other countries addressed various barriers to deployment, such as sparsely populated areas? (III 31., We are now approximately 14th in broadband deployment. Other countries especially South Korea, Japan, European Union countries have higher levels of access at faster speeds and lower prices than we. Surely these countries have developed business models and commitments that we can use in our development.)

32. We recognize that accurate and comprehensive data plays a critical role in assuring the success of a national broadband plan. As such, we seek comment on how we can ensure that any and all data collected in furtherance of developing and implementing a national broadband plan can be as accurate as possible. We also seek comment on what types of necessary public and private sector data are not being collected, how we can obtain such data, and how we should use such data in furtherance of a national broadband plan. Further, we ask how the Commission should balance legitimate confidentiality interests in the data it collects against goals of accountability and openness, as well as allowing the public to measure and review progress. (III 32., See 30 above. The Commission need to develop a definition of proprietary data and if that data is necessary to carry out its charter how to protect that data from being unfairly or illegally utilized.)

33. We seek comment on whether the Commission should, as a part of its national broadband plan, seek to collect additional data from broadband providers, consumers, health care providers, schools, libraries or other governmental organizations. If so, what specific additional data would be needed to provide a more comprehensive measurement of progress? We seek comment on how to factor in the broadband metrics study by the Government Accountability Office (GAO) that is scheduled to be submitted to Congress by October 10, 2009.³⁷ Additionally, we seek comment on whether statistics relevant to this inquiry are collected by other governmental or non-governmental entities. For example, are there appropriate quantifiable measures for the utilization of broadband in various aspects of American lives, such as home life, work, innovation, education, telecommuting, medical care, public safety and first response? (III 33., If it is the intention to put online all of those aspects list above as well as others, the Commission need to put in place privacy protections for much of the data. Access to such data must be on a restricted bases and used for a specific purpose and must be released in the aggregate and only to those entities that require it.)

34. The Government Performance and Results Act³⁸ requires Federal agencies to

³⁶ See *infra* App., para. **Error! Reference source not found.** (describing the international broadband comparison the Commission will conduct in its section 706 report).

³⁷ See *infra* App., para. **Error! Reference source not found.** (describing the requirement for the GAO to study and report on additional broadband metrics).

³⁸ Government Performance and Results Act of 1993, Pub. L. No. 103-62, 107 Stat. 285 (GPRA).

develop performance measures for major functions and operations. Guidance issued by the Office of Management and Budget (OMB)³⁹ to implement the Recovery Act states that program plans must include measures of quantifiable outcomes supported by corresponding quantifiable output measures. According to OMB, outcomes describe the intended external results of carrying out a program for its intended beneficiaries and/or the public. Also, according to OMB, outputs are an internal measure of the level of program activity that will be provided over a period of time.⁴⁰ Similarly, the GAO has addressed performance planning and practices.⁴¹ It recommends that agency plans articulate a results orientation by creating performance measures that address important dimensions of a program. Again, in its report on the Universal Service Fund's High-Cost Program,⁴² GAO emphasized that "outcome-based performance goals and measures will help illustrate to what extent, if any, the program's structure is fulfilling the guiding principles set forth by the Congress."⁴³ We seek comment on quantifiable outcome measures and corresponding output measures that would be useful in assessing progress toward the goals of a national broadband plan. We also seek comment on how progress can be measured relative to progress that would have occurred in the absence of any program to better understand the impact of the program. (III 34., Performance results is dependent upon what you are trying to achieve plus the information you have in developing the project. Accountability must be ongoing and comprehensive utilizing benchmarks so that if in the middle of a project it is shown it will not succeed it can be terminated or changed to meet the final goal.)

4. Role of Market Analysis

35. In addition to the particular inquiries outlined in the Recovery Act, should the Commission, in formulating its broadband plan, undertake a traditional market analysis with respect to any relevant market related to broadband? What are the relevant markets? Do they extend beyond broadband service provider markets to encompass backbone networks, equipment markets, applications markets or others? Within each relevant market, who are the providers, potential providers and customers? What is the appropriate geographic area for examining any relevant market? Where is competitive supply adequate? Where is demand adequate or not? What are the barriers to entry in any particular relevant market? We seek comment on these and other questions related to broadband markets that commenters think the Commission should examine in developing a plan to ensure that all Americans have access to broadband capability. (III 35., Markets have relevancy in some areas but not others. It depends upon what you wish to achieve. In many rural areas there really is no market per se. Competition will not be a factor as the areas is too large or subscriber base too small to have a market developed. Even in today's urban markets, robust competition has not taken hold except at the periphery. In most instances we have monopoly or duopoly. In such an environment markets are frustrated.)

C. Effective and Efficient Mechanisms for Ensuring Access

36. In the development of a national broadband plan, the Commission is charged by the Recovery Act with including "an analysis of the most effective and efficient mechanisms for

³⁹ Office of Management and Budget, "Initial Implementing Guidance for the American Recovery and Reinvestment Act of 2009," Memorandum, M-09-10 (Feb. 18, 2009).

⁴⁰ Office of Management and Budget, "Preparation and Submission of Strategic Plans, Annual Performance Plans, and Annual Program Performance Reports," Circular No. A-11, Part 6 (June 2008).

⁴¹ United States Government Accountability Office, "Agency Performance Plans: Examples of Practices That Can Improve Usefulness to Decisionmakers," GAO/GGD/AIMD-99-69 (February 1999).

⁴² United States Government Accountability Office, "Telecommunications: FCC Needs to Improve Performance Management and Strengthen Oversight of the High-Cost Program," GAO-08-633 (June 2008).

⁴³ *Id.* at 30.

ensuring broadband access by all people of the United States.”⁴⁴ We seek comment generally on how effective and efficient existing mechanisms have been, whether they are marketplace mechanisms, or activities of governmental or non-governmental entities that supplement or complement the market mechanisms. What mechanisms currently exist at the federal, tribal, state, and local levels, whether implemented by broadband providers or by governmental or non-governmental entities? We also seek comment on how the additional mechanisms being implemented pursuant to the Recovery Act, particularly the grant programs at NTIA and the rural broadband programs at the RUS should inform our analysis and development of a national broadband plan. Similarly, we seek comment on the extent to which programs that provide training and assistance to potential users of broadband are effective and how such programs might fit into the national broadband plan.⁴⁵ Are there additional mechanisms, or changes to existing mechanisms, that the Commission should consider? Further, we seek comment on the extent to which existing mechanisms adequately serve the goals of the Recovery Act and can meet the needs of all communities and people across the nation, including people with disabilities as well as people in urban, rural, insular, Native American and economically distressed communities. (III 36., Unless the government is committed to a takeover of the network and build and/or rebuild it and provide access to all, we will have to work on a piecemeal basis. Public/private partnerships will be necessary in some areas; municipal development in others; government subsidies in many. Private development will be dependent upon whether an area has sufficient subscribership and density to make a profit. Cooperation among the stakeholder will be necessary to achieve the goal of the Recovery Act.)

1. Market Mechanisms

37. Market mechanisms have been successful in ensuring access to broadband in many areas of the country. What is the best way to attract risk capital to broadband infrastructure projects? We also seek comment on the role of regulation in broadband infrastructure and service markets, as well as its efficacy and efficiency in achieving the important policy objectives contemplated by Congress in its directive to establish a national broadband plan. Where have market-based policies been unsuccessful in ensuring access, and why? For example, what lessons can be learned with regard to whether market forces alone can deliver broadband to rural areas, or areas such as many tribal lands, where marketplace forces alone have not yet delivered even older technologies, such as telephone service? Further, we seek comment on the extent to which our plan can, and should, encourage the combination of market-based policies with other mechanisms to achieve the goals of the Recovery Act. How can any such combinations be implemented effectively and efficiently? For instance, what factors should we consider as we evaluate how government funds for broadband development are distributed, in light of the market’s current patchwork of broadband build-out? Is there a way to distinguish between those areas that would receive service without government funding and those that would not? What have been the results of consolidation in some parts of the telecommunications industry with regard to broadband deployment? What is the role of spectrum policy, tax incentives, and other initiatives in promoting market-based delivery of the goals of a national broadband plan? (III 37., Markets work when there is real access to competition. Many suppliers and many buyers are necessary to optimize competition. The landscape for such competition in the communications industry and especially in broadband is limited. In urban areas broadband infrastructure is in the hands of monopoly or duopoly interests in telephone and cable companies. There is little or no competition with those separate entities. Some limited competition is on the fringes with

⁴⁴ Recovery Act § 6001(k)(2)(A).

⁴⁵ See *infra* paras. 54-57; see also Recovery Act § 6001(b)(3) (Among the purposes of the grant program at NTIA is to “provide broadband education, awareness, training, access, equipment, and support to . . . (B) organizations and agencies that provide outreach, access, equipment, and support services to facilitate greater use of broadband service by low-income, unemployed, aged, and otherwise vulnerable populations.”).

wireless, broadband over power lines and satellite providers. In underserved urban areas costs become a hindrance when coupled with limited competition. For rural areas which have limited or no access, competition is unlikely due to many factors mention earlier. We will have to develop private/public partnerships which will be highly advantageous to the private sector or publicly supported municipal, governmental or such entities to insure that people in these areas are covered.)

2. Determining Costs

38. In order to capably develop a national broadband plan, how useful or necessary is it for the Commission to understand the costs of deploying broadband networks to the unserved and underserved areas of our country?⁴⁶ Should the national broadband plan seek to bring broadband to 100 percent of the country? If so, what are the costs and benefits of bringing broadband to the least densely populated areas? We seek comment on how we can better estimate the cost of deploying various alternative broadband technologies to those areas that the market is not serving, or not adequately serving. Which broadband technologies might work best and deliver the most effective, efficient services in various parts of the nation? For this task, are cost models a viable tool, or are there other appropriate ways for estimating deployment costs? If cost models are appropriate tools, how should the Commission develop or otherwise obtain them?⁴⁷ Can these methods be verified in some objective, dependable manner? (III 38., Until and unless government makes a determined effort to recognize broadband as critical infrastructure and develop programs and processes to tie the network together, costs will be a primary mover in broadband development, with both present underserved and unserved areas remaining that way. We need to shift our emphasis from cost of service to value, understanding that is for the good of the nation to have all connected to the network.)

3. Universal Service Programs

39. We seek comment on the impact of broadband on our existing universal service programs, and how we should conduct our analysis of the High-Cost, Schools and Libraries, Rural Health Care (including the Rural Health Care Pilot program), and Low-Income programs. Specifically, for each program, we seek comment on the program's effectiveness and efficiency as a mechanism to help achieve national broadband goals.⁴⁸ Further, we seek comment on what modifications to these programs, if any, should be considered as a part of a national broadband plan. We seek comment on how these programs might be better targeted to address broadband deployment, particularly because these programs treat the support of broadband differently. Although the High-Cost program does not explicitly support the provision of broadband, as do the Schools and Libraries and Rural Health Care programs, a carrier providing broadband services indirectly receives the benefits of high-cost universal service support when its network provides both the supported voice services and broadband services.⁴⁹ While the Low-Income

⁴⁶ We note that the costs of deploying such networks are related to the full utilization of these networks. See *infra* Section III.D.

⁴⁷ What can we learn from the Commission's experience using cost models? See *Federal-State Joint Board on Universal Service*, CC Docket Nos. 96-45, 97-160, Further Notice of Proposed Rulemaking (1997); *Federal-State Joint Board on Universal Service*, CC Docket Nos. 96-45, 97-160, Fifth Report and Order (1998); *Federal-State Joint Board on Universal Service*, CC Docket Nos. 96-45, 97-160, Further Notice of Proposed Rulemaking (1999); *Federal-State Joint Board on Universal Service*, CC Docket Nos. 96-45, 97-160, Tenth Report and Order (1999).

⁴⁸ See *infra* App., paras. **Error! Reference source not found.-Error! Reference source not found.**; *infra* Sections III.F.5, III.F.7.

⁴⁹ The public switched network is not a single-use network, and modern network infrastructure can provide access not only to voice service, but also to data, graphics, video, and other services. The Commission's policies do not impede the deployment of modern plant capable of providing access to advanced service. See *Federal-State Joint Board on Universal Service, Multi-Association Group (MAG) Plan for Regulation*

programs do not currently support broadband, the Commission recently sought comment on a pilot project designed to make broadband affordable to low-income consumers.⁵⁰ (III 39., Perhaps it is time to look at the Universal Service Programs in a different context. Each of the different programs was instituted in a different era and for specific purpose to correct gaps in the wire line arena. Maybe it is time to completely revise the USF and determine how we can meet the goals of the new broadband area from a need basis for the entire network and not from the lens of single a programmatic issue. If we are to create an integrated broadband infrastructure, dollars need to flow to all parts of the network.)

40. In particular, we seek comment on the impact of broadband stimulus funds on the Commission's broader efforts to reform the distribution of high-cost support and the collection of universal service contributions. To the extent that financial support is necessary to ensure that adequate broadband is available in high-cost deployment areas, including those currently unserved or underserved, how do we most effectively address this need? Are there opportunities to leverage the stimulus program funds and universal service funds to maximize broadband deployment, and at the same time prevent "double dipping"? To what extent will broadband deployment require continued funding for operations and maintenance? (III 40., See 39 above)

41. Should we modify existing universal service programs? For example, should we make broadband a "supported service" eligible to receive support directly from the High-Cost and Low-Income programs? Should we create new programs specifically to provide broadband support? Should such programs be designed around the delivery of broadband? What policies or mechanism do we use to prioritize funding in an efficient manner? For instance, should unserved areas get priority? Should multiple providers in an area get support? Should we give priority to funding the construction of networks, or is ongoing support for operations and maintenance essential? If we create new programs, should these programs replace the existing programs or supplement them? If broadband services become eligible to receive high-cost and low-income support, should we also require contributions to universal service from broadband providers? What effect would such a requirement have on the economics of broadband deployment? What effect would including broadband as a supported service have on the size of the universal service fund, and on contribution requirements? (III 41., See 39 Above)

4. Wireless Service Policies

42. In the *Wireless Terrestrial Rural Report and Order*, the Commission concluded that steps were needed to promote greater deployment of wireless services, including steps to eliminate disincentives to serve or invest in rural areas, and to help reduce the costs of market entry, network deployment and continuing operations.⁵¹ Therefore, the Commission adopted

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of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers, Fourteenth Report and Order, Twenty-Second Order on Reconsideration, and Further Notice of Proposed Rulemaking in CC Docket No. 96-45, and Report and Order in CC Docket No. 00-256, 16 FCC Rcd 11244, 11322, para. 200 (2001) (*Rural Task Force Order*).

⁵⁰ See *High-Cost Universal Service Support; Federal-State Joint Board on Universal Service; Lifeline and Link Up; Universal Service Contribution Methodology; Numbering Resource Optimization; Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Developing a Unified Intercarrier Compensation Regime; Intercarrier Compensation for ISP-Bound Traffic; IP-Enabled Services*, CC Docket Nos. 01-92, 99-200, 99-68, 96-98, 96-45, WC Docket Nos. 06-122, 05-337, 04-36, 03-109, Order on Remand and Report and Order and Further Notice of Proposed Rulemaking, FCC 08-262, Apps. A, C (rel. Nov. 5, 2008) (*November 2008 Further Notice*).

⁵¹ See *Facilitating the Provision of Spectrum-Based Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies to Provide Spectrum-Based Services; 2000 Biennial Regulatory Review Spectrum Aggregation Limits For Commercial Mobile Radio Services; Increasing Flexibility To Promote Access to and the Efficient and Intensive Use of Spectrum and the Widespread Deployment of Wireless Services, and To Facilitate Capital Formation*, WT Docket Nos. 02-381, 01-14, 03-202, Report and Order

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measures designed to increase carrier flexibility, reduce regulatory costs of providing service to rural areas, and promote access to both spectrum and capital resources for entities seeking to provide or improve wireless services in rural areas. Should the Commission employ other mechanisms to encourage wireless broadband deployment in rural and tribal areas? For example, have bidding credits for carriers proposing to serve tribal lands been successful in encouraging deployment of wireless services, including broadband, to Indian Country? (III 42., While this is a mostly technical issue, I would comment that the Commissions needs to look at wireless in the same way it needs to focus on USF. Is subsidizing multiple carriers in an underserved area a better methodology than subsidizing a single carrier in an unserved area; however that area is defined? Should we move forward with government – federal, state, local when developing the wireless infrastructure in those areas that can utilize wireless.)

43. We also seek comment on how different regulatory approaches that the Commission has adopted in the past, such as facilitating more efficient spectrum use, developing licensing rules and construction requirements, designating spectrum for licensed versus license-exempt use, secondary markets, cognitive radio, or other policies can ensure efficient and effective access to broadband.⁵² For example, what about the adoption of more rigorous buildout obligations for wireless services, such as were recently adopted by the Commission with regard to the 700 MHz band?⁵³ How effective will these policies be with regard to ensuring delivery of broadband services in rural areas, or how may they discourage investment? More importantly, how can the Commission ensure that any measures to encourage wireless broadband service coincide with and complement other broadband platforms (and vice versa)? (III 43., See 42 Above)

44. We seek comment on the extent to which access to spectrum may pose a constraint on broadband access and development. We also seek suggestions for approaches toward spectrum allocation, assignment, management, and use that will best promote national access to broadband service. For example, should the Commission conduct a “spectrum census” or “spectrum inventory” to identify spectrum bands that may be suitable for wireless broadband services?⁵⁴ If so, which portions of the spectrum would be most appropriate for examination? There are a variety of ways in which the Commission might conduct a “spectrum census” or “spectrum inventory”, including review of spectrum allocations, licenses, spectrum monitoring, and user surveys. What approaches would be most effective in assessing the actual use of

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and Further Notice of Proposed Rule Making, 19 FCC Rcd 19078 (2004) (*Wireless Terrestrial Rural Report and Order*).

⁵² See, e.g., *Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets*, WT Docket No. 00-230, Report and Order and Further Notice of Proposed Rulemaking, 18 FCC Rcd 20604 (2003).

⁵³ See *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands; Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Section 68.4(a) of the Commission’s Rules Governing Hearing Aid-Compatible Telephones; Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services; Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission’s Rules; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band; Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010; Declaratory Ruling on Reporting Requirement under Commission’s Part 1 Anti-Collusion Rule*, WT Docket Nos. 07-166, 06-169, 06-150, 03-264, 96-86, PS Docket No. 06-229, CC Docket No. 94-102, Second Report and Order, 22 FCC Rcd 15289 (2007) (*700 MHz Second Report and Order*).

⁵⁴ In a 2006 Report, the GAO recommended that the FCC engage in a “spectrum census.” See United States Government Accountability Office, “Telecommunications: Options for and Barriers to Spectrum Reform,” GAO-06-526T (Mar. 2006), at 15.

existing spectrum and gauging potential opportunities for wireless broadband services? How should we measure “use” of spectrum, accounting for different technical properties, licensing framework, and the like, in determining whether spectrum is being fully utilized? In conducting such a census or inventory, how should “underutilized spectrum” be defined and what actions should be taken if the spectrum is underutilized? Would such a census or inventory, especially if conducted along with a similar census or inventory by the National Telecommunications and Information Administration of Federal Government spectrum use, be helpful in implementing a more efficient use of spectrum or locating spectrum used for other purposes that could be reallocated and made available to meet growing demand for broadband communications and data services? More broadly, in developing a national broadband plan, we seek comment on how the Commission’s joint spectrum policy responsibilities with NTIA should inform this plan.⁵⁵ To what extent can new technologies such as cognitive radio enable more efficient use of existing spectrum allocations or create new opportunities for sharing spectrum with existing services? (III 44., Knowing where, how, and why wireless is being used is necessary just as the mapping of wire line broadband is critical for determining where and how to build out the infrastructure.)

45. The Commission has recently adopted the *White Spaces Order*, which opens up the use of significant spectrum in the core TV spectrum bands for use by unlicensed devices.⁵⁶ Many see these rules as creating an important new mechanism that can help ensure broadband services become available for more Americans. Given the importance to wireless broadband services of backhaul to the PSTN and the Internet, how can this spectrum be maximized to provide point-to-point backhaul in rural areas?⁵⁷ Several other bands are currently used by WISPs to provide broadband through the use of unlicensed devices.⁵⁸ What more should the Commission do with respect to permitting the use of unlicensed devices? How should the Commission measure “subscriberhip” or use of devices utilizing unlicensed spectrum? What more should the Commission do to promote the development of cognitive radio devices in order to ensure more availability of spectrum for broadband uses?⁵⁹ To what extent should unlicensed wireless play a role in a national broadband plan? (III 45., Technical issue, no comment)

46. The Commission has fostered opportunities for new satellite services capable of delivering broadband from satellite-based platforms. In implementing the Broadcasting-Satellite Service in the 17/24 GHz band, the Commission has created the potential for a new generation of broadband services to the public, providing a mix of local and domestic video, audio, data, video-on-demand and multi-media services to U.S. consumers.⁶⁰ Satellite operators have also been

⁵⁵ See United States Government Accountability Office, “Telecommunications: Options for and Barriers to Spectrum Reform,” GAO-06-526T (Mar. 2006); United States Government Accountability Office, “Telecommunications: Comprehensive Review of U.S. Spectrum Management with Broad Stakeholder Involvement Is Needed,” GAO-03-277 (Jan. 2003).

⁵⁶ *Unlicensed Operation in the TV Broadcast Bands; Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band*, ET Docket Nos. 04-186, 02-380, Second Report and Order, 23 FCC Rcd 16807 (2008) (*White Spaces Second Report and Order*).

⁵⁷ *White Spaces Second Report and Order*, 23 FCC Rcd 16807, at para. 160.

⁵⁸ WISPs operate primarily on unlicensed spectrum in 900 MHz, 2.4 GHz, 3.6 GHz, 5.3 GHz and 5.8 GHz bands and have shown strong interest in the use of white space frequencies. See Wireless Internet Service Providers Association (WISPA), Ex Parte Presentation, WT Docket Nos. 04-186, 02-380 at 2 (filed Oct. 22, 2008) available at http://www.nab.org/Xert/CorpComm/PressRel/Releases/102208_WISPA_WhiteSpaces.pdf.

⁵⁹ *Facilitating Opportunities for Flexible, Efficient, and Reliable Spectrum Use Employing Cognitive Radio Technologies; Authorization and Use of Software Defined Radios*, ET Docket Nos. 03-108, 00-47, Notice of Proposed Rulemaking and Order, 18 FCC Rcd 26859 (2003).

⁶⁰ *The Establishment of Policies and Service Rules for the Broadcasting-Satellite Service at the 17.3-17.7 GHz Frequency Band and at the 17.7-17.8 GHz Frequency Band Internationally, and at the 24.75-25.25*

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authorized to maximize spectrum utilization through the provision of ancillary terrestrial component services, including wireless broadband. Moreover, the Commission continues to license satellite-based broadband services for consumers in aeronautical, land-mobile and maritime environments.⁶¹ The Commission has also streamlined non-routine earth station processing rules, which has facilitated access to terrestrial communications facilities by satellite-based broadband service providers.⁶² Given the ubiquitous coverage capabilities of satellites, we seek comment on what further actions the Commission can take to promote the use of satellite-based platforms for access to broadband, especially in rural and remote communities. (III 46., Technical issue. Only comment is all devices must be interoperable and compatible.)

5. Open Networks

47. We seek comment on the value of open networks as an effective and efficient mechanism for ensuring broadband access for all Americans, and specifically on how the term “open” should be defined. For example, should it incorporate access, interconnection, nondiscrimination, or infrastructure sharing principles? The Commission, through its *Computer Inquiry* proceedings, developed specific nondiscrimination requirements for facilities-based telecommunications carriers,⁶³ although several of these obligations have been scaled back by the

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GHz Frequency Band for Fixed Satellite Services Providing Feeder Links to the Broadcasting-Satellite Service and for the Satellite Services Operating Bi-directionally in the 17.3-17.8 GHz Frequency Band, IB Docket No. 06-123, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 8842 (2007).

⁶¹ See, e.g., *ViaSat, Inc. Application for Blanket Authority for Operation of 1,000 Technically Identical Ku-Band Aircraft Earth Stations in the United States and Over Territorial Waters*, Order and Authorization, 22 FCC Rcd 19964 (IB & OET 2007); *RaySat Antenna Systems, LLC Application for Authority to Operate 400 Land Mobile-Satellite Service Earth Stations in the 14.0-14.5 GHz and 11.7-12.2 GHz Frequency Bands*, Order and Authorization, 23 FCC Rcd 1985 (IB & OET 2008); *Procedures to Govern the Use of Satellite Earth Stations on Board Vessels in the 5925-6425 MHz/3700-4200 MHz Bands and 14.0-14.5 GHz/11.7-12.2 GHz Bands*, IB Docket No. 02-10, Report and Order, 20 FCC Rcd 674 (2005).

⁶² *Streamlining the Commission's Rules and Regulations for Satellite Applications and Licensing Procedures*, IB Docket Nos. 95-117 and 00-248, Eighth Report and Order and Order on Reconsideration, 23 FCC Rcd 15099 (2008).

⁶³ See *Amendment of Section 64.702 of the Commission's Rules and Regulations*, CC Docket No. 85-229, Phase I, 104 FCC 2d 958 (1986) (*Computer III Phase I Order*), recon., 2 FCC Rcd 3035 (1987) (*Computer III Phase I Reconsideration Order*), further recon., 3 FCC Rcd 1135 (1988) (*Computer III Phase I Further Reconsideration Order*), second further recon., 4 FCC Rcd 5927 (1989) (*Computer III Phase I Second Further Reconsideration Order*); *Phase I Order and Phase I Recon. Order vacated sub nom. California v. FCC*, 905 F.2d 1217 (9th Cir. 1990) (*California I*); CC Docket No. 85-229, Phase II, 2 FCC Rcd 3072 (1987) (*Computer III Phase II Order*), recon., 3 FCC Rcd 1150 (1988) (*Computer III Phase II Reconsideration Order*), further recon., 4 FCC Rcd 5927 (1989) (*Phase II Further Reconsideration Order*); *Phase II Order vacated, California I*, 905 F.2d 1217 (9th Cir. 1990); *Computer III Remand Proceeding*, CC Docket No. 90-368, 5 FCC Rcd 7719 (1990) (*ONA Remand Order*), recon., 7 FCC Rcd 909 (1992), *pets. for review denied sub nom. California v. FCC*, 4 F.3d 1505 (9th Cir. 1993) (*California II*); *Computer III Remand Proceedings: Bell Operating Company Safeguards and Tier 1 Local Exchange Company Safeguards*, CC Docket No. 90-623, 6 FCC Rcd 7571 (1991) (*BOC Safeguards Order*), *BOC Safeguards Order vacated in part and remanded sub nom. California v. FCC*, 39 F.3d 919 (9th Cir. 1994) (*California III*), cert. denied, 514 U.S. 1050 (1995); *Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services*, CC Docket No. 95-20, Notice of Proposed Rulemaking, 10 FCC Rcd 8360 (1995) (*Computer III Further Remand Notice*), Further Notice of Proposed Rulemaking, 13 FCC Rcd 6040 (1998) (*Computer III Further Remand Further Notice*); Report and Order, 14 FCC Rcd 4289 (1999) (*Computer III Further Remand Order*), recon., 14 FCC Rcd 21628 (1999) (*Computer III Further Remand Reconsideration Order*); see also *Further Comment Requested to Update and Refresh Record on Computer III Requirements*, CC Docket Nos. 95-20, 98-10, Public Notice, 16 FCC

(continued....)

courts and by the Commission's revised regulatory framework for wireline broadband Internet access services and other deregulatory measures.⁶⁴ However, as the regulatory framework for broadband Internet access services changed, the Commission has taken steps to clarify the importance of open networks.⁶⁵ For instance, the Commission published its *Internet Policy Statement* establishing four principles "to ensure that broadband networks are widely deployed, open, affordable, and accessible to all consumers."⁶⁶ More recently, the Commission clarified its authority to enforce those principles and has initiated a proceeding to review broadband industry practices generally.⁶⁷ In addition, as discussed below, the Commission adopted a requirement for licensees in the 700 MHz Upper C Block to provide an open platform for devices and applications, subject to certain conditions in the 700 MHz auction.⁶⁸ We also note that the Recovery Act requires the Commission to coordinate with NTIA on the publication of "non-discrimination and interconnection obligations" that will apply to grants received from NTIA "including, at a minimum, adherence to the principles contained in the Commission's [*Internet Policy Statement*]."⁶⁹ (III 47., Open, non-discriminatory networks are essential to the development and implementation of broadband that is accessible to all. The Commission must adhere to, monitor and enforce such provisions.)

48. We seek comment on the state of broadband infrastructure and service

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Rcd 5363 (2001) (asking whether, under the ONA framework, information service providers can obtain the telecommunications inputs, including digital subscriber line (DSL) service, they require) (collectively referred to as *Computer III*).

⁶⁴ See, e.g., *Wireline Broadband Order*, 20 FCC Rcd 14853 (2005); *National Cable & Telecommunications Ass'n v. Brand X Internet Services*, 125 S. Ct. 2688 (2005) (*NCTA v. Brand X*), *aff'g Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities; Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, GN Docket No. 00-185, CS Docket No. 02-52, Declaratory Ruling and Notice of Proposed Rulemaking, 17 FCC Rcd 4798 (2002) (*Cable Modem Declaratory Ruling and NPRM*); *Qwest Petition for Forbearance Under 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to Broadband Services*, WC Docket 06-125, Memorandum Opinion and Order, 23 FCC Rcd 12260 (2008).

⁶⁵ See *infra* App., para. **Error! Reference source not found..** In addition, as discussed in para. 99 *infra*, the Commission adopted a requirement for licensees in the 700 MHz Upper C Block to provide an open platform for devices and applications, subject to certain conditions in the 700 MHz auction.

⁶⁶ *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review – Review of Computer III and ONA Safeguards and Requirements; Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, Policy Statement, 20 FCC Rcd 14987-88, para. 4 (2005) (*Internet Policy Statement*).

⁶⁷ See generally *Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Secretly Degrading Peer-to-Peer Applications; Broadband Industry Practices; Petition of Free Press et al. for Declaratory Ruling that Degrading an Internet Application Violates the FCC's Internet Policy Statement and Does Not Meet an Exception for "Reasonable Network Management,"* File No. EB-08-IH-1518, WC Docket No. 07-52, Memorandum Opinion and Order, 23 FCC Rcd 13028 (2008) (*Comcast Order*) *pet. for review pending*, *Comcast Corporation v. FCC*, No. 08-1291 (D.C. Cir. Sept. 4, 2008) (asserting the Commission's authority to enforce the *Internet Policy Statement* and addressing network management practices and consumer notice issues); *Broadband Industry Practices*, WC Docket No. 07-52, Notice of Inquiry, 22 FCC Rcd 7894 (2007).

⁶⁸ See *infra* para. 99.

⁶⁹ Recovery Act § 6001(j); see *infra* App., para. **Error! Reference source not found. & n.Error! Bookmark not defined..**

competition, interconnection, nondiscrimination, and openness, and whether these should factor into development of a national broadband plan. We ask commenters to address the value of open networks, and specifically, the impact on investment, innovation and entrepreneurship, content, competition and affordability of broadband, among other things. For instance, has the private sector sufficiently produced open platforms, and if so, to what extent? Would further regulation encourage or discourage more open platform innovation? We seek comment on how and whether open network principles should be incorporated into a national broadband plan. We note that some have suggested the need for a so-called “fifth principle” on nondiscrimination.⁷⁰ If the Commission were to adopt such a principle, what would be a definition of “nondiscrimination”? We ask commenters to address whether such a principle is necessary in light of the current state of competition and the four existing Internet policy principles. What would be the impact of adopting a principle requiring nondiscrimination? What would be the result if the Commission chose not to adopt such a principle, or if its *Internet Policy Statement* principles were found to be unenforceable? Should the underlying facilities over which service is provided have any impact on how open network policy should be applied to broadband providers? With regard to applying open network policies to wireless networks, what are the costs and benefits, technical considerations, bandwidth constraints, or constraints associated with the capacity of mobile wireless devices or networks that should be given consideration?⁷¹ (III 48., Open, non-discriminatory networks are virtually the only infrastructure that will help guarantee innovation and opportunity to develop new products and services for broadband. Without a vibrant and innovative environment this development will not continue. It will stifle this innovation. One of the ongoing problems of private, closed networks is that new products and services, if it does not fit the bottom line of private enterprise will be unable to flourish. The principle of non-discrimination and openness helps insure the endless innovation necessary for a vibrant broadband network.)

6. Competition

49. We seek comment on the extent to which competition between various broadband network providers, application and service providers, and content providers should be evaluated as an effective and efficient mechanism to achieve the goals of the Recovery Act.⁷² We seek comment on whether multiple providers of broadband services are useful or necessary for achieving our goal of providing broadband services to unserved and underserved areas. While competition between multiple providers may lower prices and provide a greater diversity of services, how does subsidizing more than one provider in areas with low population density affect the ability of the providers to achieve optimal economies of scale and to continue to operate effectively? Does it make a difference if the providers utilize different technological broadband platforms? How should we evaluate the potentially increased costs of supporting multiple providers relative to any benefits to consumer welfare from competition? We also seek comment on how we should define sufficient competition as we evaluate competition as a potentially effective and efficient mechanism for broadband deployment. Are there any other factors that we should consider in determining if a service provider should be counted as a competitor? Further

⁷⁰ See, e.g., *Broadband Industry Practices*, WC Docket No. 07-52, Notice of Inquiry, 22 FCC Rcd 7894, 7898, para. 10 (2007).

⁷¹ We note that the extent to which the principles in the *Internet Policy Statement* apply to wireless service providers is currently before the Commission in the Skype proceeding and we do not prejudge that issue here. See Petition of Skype Communications S.A.R.L. to Confirm a Consumer’s Right to Use Internet Communications Software and Attach Devices to Wireless Networks, RM-11361, filed February 20, 2007.

⁷² We note that a similar concept is captured in the fourth principle in the Commission’s *Internet Policy Statement*. See 20 FCC Rcd at 14987-88, para. 4 (“To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet, consumers are entitled to competition among network providers, application and service providers, and content providers.”) (emphasis in original).

we seek comment on additional metrics to assess the effects of competition in the provision of broadband services. (III 49., Different technological networks are not a problems except if the networks are not compatible or interoperable. Multiple providers in low density areas may not serve to lower prices or give better service, at least without large subsidies to all carriers. Under this scenario we get a cost shift in which taxpayer dollars are used to support these carriers without the benefits of better overall services and/or lower costs. If we go with a single provider care must be taken that regulations are in place to prevent monopoly rents from occurring.)

7. Other Mechanisms

50. Are there other policies or programs that the Commission should review as a part of its analysis of effective and efficient mechanisms to achieve the goals of the Recovery Act? For instance, there are numerous proceedings impacting competition among broadband providers of all types in which parties advocate that certain changes will help to expedite the deployment of broadband facilities and services.⁷³ More generally, to what extent do tower siting, pole attachments, backhaul costs, cable franchising and rights of way issues, as well as others, stand as impediments to further broadband deployments where such deployments would be made by market participants in the absence of any government-funded programs? We also note that the development of equipment and protocol standards is a key element in broadband deployment and seek comment on the appropriate role of the Commission in facilitating the development of such standards. We seek comment on how this variety of proceedings and policies could or should be evaluated by the Commission as a part of its development of a national broadband plan. We also ask whether there are requirements or policies contained in any current federal, state, or local broadband grant or loan programs that act as strong incentives or disincentives for the deployment of broadband. (III 50., The Commission should work to remove barriers to development along with competition in order to implement the Recovery Act. The Commission should act as honest broker to insure that standards and protocols insures the interoperability of the entire network and that companies do not get into the position of being a monopoly provider.)

51. Finally, we seek comment on any national broadband policies or programs adopted by other nations or international organizations that may be useful to the Commission in this proceeding. We seek information on specific plans or other initiatives designed to enhance broadband development in other countries and the appropriateness of introducing the same or similar plans here. These may include: consumer outreach, such as education designed for underserved communities, and the promotion of consumer access to service pricing and capacity information; subsidy programs, especially information on how projects are identified and prioritized and how funds are disbursed, (including such mechanisms as reverse auctions); competition policy, including reviews for dominance or significant market power; and other regulatory actions, such as rules for licensing, unbundling, and open networks. We also are interested in hearing about how other countries have overcome any challenges. For instance, how have other countries accounted for any differences between actual and advertised speeds? What do other countries consider to be robust broadband speeds? How have they addressed challenges relating to geography, population density and dispersion, household size, GDP per capita, income distribution, education, population age, relative size of the country's largest cities, size of businesses, telephone penetration, consumer preferences, purchasing power parity, and any other

⁷³ See, e.g., *In the Matter of Special Access Rates for Price Cap Local Exchange Carriers; AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, WC Docket No. 05-25, RM-10593, Order and Notice of Proposed Rulemaking, 20 FCC Rcd 1994 (2005) (special access rates); *Implementation of Section 224 of the Act; Amendment of the Commission's Rules and Policies Governing Pole Attachments*, WC Docket No. 07-245, RM Docket Nos. 11293, 11303, Notice of Proposed Rulemaking, 22 FCC Rcd 20195 (2007) (pole attachments); *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT 05-26, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 15817 (2007) (wireless data roaming); *November 2008 Further Notice*, FCC 08-262, paras. 30-37, Apps. A-C (intercarrier compensation).

potentially relevant factors? How have other countries determined the types of data to collect and the sources of that data (*e.g.*, consumer survey versus industry census), and how have they developed methodologies that ensure the reliability and accuracy of the data that they do collect? Finally, how does consumer satisfaction vary among countries? (III 51., Unfamiliar with other nations specific broadband policies. The Commission should look at those country's policies whose development exceeds ours to determine if any of those policies and actions can be utilized here.)

D. Affordability and Maximum Utilization

52. The Recovery Act requires that the Commission formulate “a detailed strategy for achieving affordability of such service and maximum utilization of broadband infrastructure and service by the public.”⁷⁴ We seek comment generally on how to interpret this task, including how the goals of affordability and maximum utilization work together, or separately. As broadband becomes more affordable, will more consumers use broadband? Beyond affordability, what factors, such as digital literacy, affect consumers’ choices regarding broadband? Are issues of privacy inhibiting consumer use and adoption of broadband technology? Also, as these various broadband platforms are deployed, what steps should the Commission take to ensure that delivery of services is competitive, and thus protects consumers and helps promote lower prices? Should the Commission revise its competitive review policies to take intermodal competition into account more or less? (III 52., Affordability while very important is one aspect in determining broadband usage. Once availability is achieved, access is the next step. In a study done several years ago (before internet and wireless), the Benton Foundation in a study determined that consumers were willing to pay about .7% for telephone services. No such study has been conducted to determine what consumers are willing to pay for today’s communication services. Perhaps to Commission could undertake such a study in addition to its broadband mapping. At least we would have a benchmark to begin with. The literacy issue as well as cost of computers and other devices will also have a profound effect on usage. The Commission should use its regulatory and other powers to insure a level playing field in the deployment and access to broadband.)

53. We seek comment on how consumers and businesses are using broadband. Similarly, we seek comment on who is (and is not) using broadband – children, immigrants, small businesses, seniors, persons of color, tribal communities, people with disabilities, people with low income, and others. We seek comment on how we would monitor or measure affordability and maximum utilization of infrastructure, and how we might address any problems, including changes or additions to regulatory requirements that need to be made to better address affordability and maximum utilization? How could the Commission establish benchmarks or measure progress toward this goal? Are there existing data sources the Commission could draw upon, or are there specific data the Commission should collect itself? In this regard, we seek comment on how we should incorporate the analysis and recommendations of the Government Accountability Office, which is tasked with developing a report analyzing additional metrics for broadband cost, capability, deployment, and penetration.⁷⁵ Further, we seek comment on any programs or policies adopted by other nations or international organizations aimed at achieving affordability for broadband services that may be useful to the Commission in this proceeding. (III 53., As noted above the Commission needs to conduct a series of studies on usage, costs, willingness to pay, and familiarity with computers and other systems which will tell us where the emphasis should be placed in education, cost, etc. of usage.)

1. Affordability

54. We seek comment on how the Commission should define “affordability” with

⁷⁴ Recovery Act § 6001(k)(2)(B).

⁷⁵ BDIA § 104.

respect to broadband access. How should affordability be measured? To what extent does the fact that service providers typically offer different levels of broadband capability and access at different price points affect this definition? We seek comment on the role that other programs, at the Commission or elsewhere, may have in our evaluation of this topic. For instance, we seek comment on how to evaluate affordability for broadband services consistent with our obligation to base universal service policies on the principle that “[q]uality services should be available at just, reasonable, and *affordable* rates.”⁷⁶ How should the Commission encourage consumers to more fully utilize broadband access already available to them?⁷⁷ For example, through the Lifeline and Link-Up programs, the Commission partially supports the monthly subscription costs and initial hook-up fees for telephone service.⁷⁸ How do existing government subsidies of traditional telephone networks and services impact broadband uptake, deployment, and affordability? We seek comment on whether subsidizing the recurring subscription cost for broadband service, or subsidizing the fixed costs of obtaining computer equipment could address the affordability of broadband for all Americans.⁷⁹ We also seek comment on how particular consumer communities of interest should be evaluated in such programs.⁸⁰ (III 54., The concept of affordability must be flexible as affordability means different things to different people as well as what sacrifices an individual will make to achieve a goal. Until and unless we make as a nation a commitment to a particular level of service, speed and bandwidth, the Commission in concert with stakeholders must come up with a minimum level of service at an affordable price for all that will be flexible and be reviewed constantly as consumers and businesses become more sophisticated in utilizing broadband. While lifeline and other programs to subsidize connection and usage to the telephone network have been somewhat successful, they are easier to deal with as telephone system was limited to voice communications for those services. Broadband development and deployment as well as types of usage are must more diverse and complicated and we need to rethink such programs.)

2. Maximum Utilization

55. A full understanding of the value of broadband networks and the Internet may not be grasped by all Americans. Moreover, many Americans may lack the complement of computer or other skills necessary to fully participate in the digital broadband era. Accordingly, we seek comment on how improving the digital literacy skills of Americans would create

⁷⁶ 47 U.S.C. § 254(b)(1) (emphasis added); *see also* 47 U.S.C. § 151 (the purposes of the Act include “to make available, so far as possible, without discrimination on the basis of race, color, religion, national origin, or sex, a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges.”).

⁷⁷ *See* Pew Internet & American Life Project Survey, Adoption Stalls for Low-Income Americans Even as Many Broadband Users Opt for Premium Services That Give Them More Speed, at iii (July 2008), at http://www.pewinternet.org/~media/Files/Reports/2008/PIP_Broadband_2008.pdf (indicating that “19% of dial-up users said nothing would convince them to get broadband”).

⁷⁸ *See infra* App., para. **Error! Reference source not found.** & n.**Error! Bookmark not defined.**

⁷⁹ *See November 2008 Further Notice*, FCC 08-262, App. A, paras. 64-91, App C., paras. 60-87 (proposed extension of Lifeline/Linkup programs to broadband).

⁸⁰ For example, parties have recommended that the Commission modify its Lifeline and Link Up programs to subsidize the cost of broadband connections for deaf and blind users who rely on video relay services (VRS) and telecommunications relay services (TRS) services to communicate. GoAmerica Comments at 2-3 in *High-Cost Universal Service Support, Federal-State Joint Board on Universal Service, Lifeline and Link Up, Universal Service Contribution Methodology, Numbering Resource Optimization, Implementation of the Local Competition, Provisions in the Telecommunications Act of 1996, Developing a Unified Intercarrier Compensation Regime, Intercarrier Compensation for ISP-Bound Traffic, IP-Enabled Services*, WC Docket No. 05-337, CC Docket No. 96-45, WC Docket No. 03-109, WC Docket No. 06-122, CC Docket No. 99-200, CC Docket No. 96-98, CC Docket No. 01-92, CC Docket No. 99-68, WC Docket No. 04-36 (filed Nov. 26, 2008).

additional demand for broadband, thus more fully utilizing the broadband infrastructure. Along these lines, how does lack of a computer or other broadband access device affect broadband utilization and, if lack of broadband access device ownership is an obstacle to maximum utilization, how can that obstacle be reduced?⁸¹ Further, are there media literacy skills that could educate our children, for example, to better understand and use all of the information available to them over this technology? How do content protections, like copyright, affect how broadband networks are deployed and used? How do such protections affect what individuals can do with broadband services and how should the Commission consider these questions in the formulation of a national broadband plan? (III 55., The statement answers the question. Without an educated population in the use of the network and its systems, people cannot fully utilize the system. Ongoing educational programs must be instituted to insure a literate population).

56. To what extent should programs that address consumer training and education about broadband play a role in a national broadband plan? For example, the Recovery Act directs NTIA to provide grants to “provide broadband education, awareness, training, access, equipment, and support to . . . organizations and agencies that provide outreach, access, equipment, and support services to facilitate greater use of broadband service by low-income, unemployed, aged, and otherwise vulnerable populations.”⁸² Are there ways to encourage maximum utilization of broadband infrastructure and services via the universal service programs, through federal, tribal, state, and local government initiatives, or through private and public/private initiatives? Are there specific communities that such policies should focus more heavily on, such as rural, low-income, tribal, insular, persons of color, senior citizens, or persons with disabilities? What opportunities are there to leverage federal, tribal, state, and local initiatives unrelated to broadband in an effort to increase broadband utilization? For example, are there “smart housing” initiatives that promote the connection of broadband to affordable housing?⁸³ (III 56., We must utilize all available resources to inform and educate people on the benefits of utilizing the broadband network and well as inventing new resources. This process must be taught by knowledgeable educators and not computer persons. The key is working in specific communities with people knowledgeable about their community so that those not literate will be comfortable in the learning situation.)

57. We also seek comment on the extent to which a centralized clearinghouse for outreach and computer and broadband training initiatives should be a component of the national broadband plan. For instance, what can the Commission learn from prior outreach campaigns?⁸⁴ If outreach programs or the development of a clearinghouse of information and programs is warranted, we seek comment on the best ways to incorporate these practices into a national broadband plan. (III 57., Because of our diverse population, we cannot assume that there is a silver bullet which will serve all. While a clearinghouse may be useful it is only a tool in which we can determine what worked on not worked on a particular population. It is not a roadmap.)

⁸¹ See *supra* para. 54.

⁸² Recovery Act § 6001(b)(3).

⁸³ See, e.g., California Emerging Technology Fund, Annual Report 2009 at 14, *available at* http://cetfund.org/files/CETF_Annual_Report_web_Accessible.pdf.

⁸⁴ For instance, the Commission and USDA launched a “Broadband Opportunities for Rural America” website in 2008 and conducted regional workshops designed to provide communities, organizations, and businesses in rural America seeking to bring the benefits of broadband to their communities with an opportunity to learn about the resources, programs, and policies of the Commission and USDA. See FCC, Broadband Opportunities for Rural America, http://wireless.fcc.gov/outreach/index.htm?job=broadband_home; FCC, Broadband Opportunities for Rural America, http://wireless.fcc.gov/outreach/index.htm?job=broadband_home, and FCC/USDA Rural Broadband Educational Workshops, <http://wireless.fcc.gov/outreach/index.htm?job=workshop>; FCC, Making the Rural Connection: FCC Satellite Rural Forum, <http://www.fcc.gov/cgb/rural/ruralforum.html>.

3. Broadband Privacy

58. Americans are using broadband to perform everyday tasks in which they pass personal and confidential information over broadband connections, raising important consumer privacy concerns.⁸⁵ As a result, it is important to consider the privacy implications of such use in connection with our development of a national broadband plan. (III 58., The weakest link to the use of broadband is the problem of privacy of the information gathered. The Commission and Congress must craft rule with teeth to insure that such information is kept private and not shared with third parties.)

59. The last several years have witnessed significant growth in multi-platform services, such as mobile wireless telephones enabled with broadband Internet access; bundled service offerings of voice, video, and broadband communications; and voice services offered over broadband. What are consumer expectations of privacy when using broadband services or technology and what impact do privacy concerns have on broadband adoption and use? We also note that certain broadband providers have purchased the behavioral advertising⁸⁶ services of companies that advertise an ability to “deliver[] the most actionable consumer intelligence by extending [those companies’] reach dynamically to encompass the ever-growing network of sites that consumers visit.”⁸⁷ These companies track the webpages customers visit, the searches they perform, and the ads they click, among other information.⁸⁸ Consumers may also be aware of the

⁸⁵ For instance, millions of Americans pay bills, file their taxes, and send and receive financial information over broadband connections. *See, e.g.,* Russell, Roger, *IRS Survey: Online Filing Continuing to Grow*, 22 Accounting Today, 10 (Apr. 14, 2008) (noting that an increasing number of taxpayers are filing their tax returns online with alternatives such as IRS E-file and Free File, and some of these include direct deposit options for refunds). We also participate in the political process, order prescriptions, and even obtain health care remotely. *See Maimonides Medical Center Deploys the PGP Encryption Platform*, Health and Medicine Week 2007, WLNR 6995121 (Apr. 16, 2008) (stating that “email communication has become a primary communications tool in health care, enabling doctors, hospital administrators, and insurance representatives to exchange email with patients and employees.”). We also research all kinds of topics, some of which may be intensely personal.

⁸⁶ Behavioral advertising is the tracking of a consumer’s activities online – including the searches the consumer has conducted, the webpages visited, and the content viewed – in order to deliver advertising targeted to the individual consumer’s interests. Congress has taken note of the issue, looking at how deep packet inspection (*see* definition at note 89) technologies affect consumer privacy and related issues. *See* House Subcommittee on Telecommunications and Internet Hearing: “What Your Broadband Provider Knows About Your Web Use: Deep Packet Inspection and Communications Laws and Policies,” July 18, 2008; Senate Committee on Commerce, Science, and Transportation Hearing: “Privacy Implications of Online Advertising,” July 9, 2008. Also, in November 2007, the Federal Trade Commission (FTC) hosted a Town Hall meeting to focus on privacy issues raised by behavioral advertising. *See* FTC Staff Proposes Online Behavioral Advertising Privacy Principles, Dec. 20, 2007, *available at* <http://www.ftc.gov/opa/2007/12/principles.shtml>. On December 20, 2007, the staff of the FTC released a set of proposed principles to guide the development of self-regulation in online behavioral advertising, and sought comment from the public. *See* Behavioral Advertising, Moving the Discussion Forward to Possible Self-Regulatory Principles, *available at* <http://www.ftc.gov/os/2007/12/P859900stmt.pdf>.

⁸⁷ *See, e.g.,* Letter from Neil Smit, President & CEO, Charter Communications, to Congressmen John D. Dingell, Joe Barton, Edward J. Markey, and Cliff Sterns, *available at* http://markey.house.gov/docs/telecomm/charters_communications_080808.pdf (dated Aug. 8, 2008) (stating that Charter planned a limited pilot with NebuAd).

⁸⁸ *See NebuAd Advertising Network Policy: US Version*, *available at* http://www.nebuad.com/privacy/ad_network_privacy_policy.php (describing its policies regarding the collection, use, and sharing of consumers’ Internet activity data) (last visited Apr. 7, 2009). NebuAd states that its vendors collect consumer IP addresses for a limited purpose and that they are immediately discarded. *Id.* We understand that broadband providers generally know to whom they have assigned IP addresses, even in the case of dynamic IP addresses because such providers generally keep a log of the date, time, duration and dynamic IP address given to the Internet user. For this reason, certain European

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technological ability that broadband providers have to perform functions such as deep packet inspection.⁸⁹ What is the impact of this type of activity on consumers' willingness to use broadband services? We seek comment on how the Commission should treat issues such as deep packet inspection and behavioral advertising in developing a national broadband plan and whether there are issues related to other types of information connected with the provision of broadband services that the Commission should consider. Do these practices discourage consumers from "access[ing] the lawful Internet content of their choice" for fear of having that access tracked or revealed?⁹⁰ If consumers view this negatively, is it something that Congress or government agencies should address, or can privacy protections be achieved through industry self-regulation, such as industry best practices? Would protection of customers' private information spur consumer demand for broadband connections, and consequently encourage more broadband investment and deployment consistent with the goals of section 706?⁹¹ (III 59., The way the internet works today, most consumers assume that all information is subject being read. Even with opt out provisions there is not certainty that such information will remain private as there is no consequences to not following "best practices" or "voluntary" guidelines. Behavioral advertising and deep packet inspection becomes a wall in the furtherance of open communication. All such use must be based on opt in protocols. Other uses should be only for law enforcement needs.)

60. The Commission has long been committed to safeguarding customer privacy and repeatedly has taken steps to ensure that private customer information is adequately protected. In fact, the Commission has already stated that consumers' privacy needs are no less important when consumers communicate over and use broadband Internet access than when they rely on telecommunications services.⁹² Should the Commission consider as part of its plan whether to exercise its ancillary jurisdiction to address broadband privacy issues, or are other approaches available?⁹³ (III 60., Yes)

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regulators view an IP address as personal data. *See, e.g.,* Article 29 Data Protection Working Party, WP 136 (June 20, 2007), *available at* http://ec.europa.eu/justice_home/fsj/privacy/docs/wpdocs/2007/wp136_en.pdf.

⁸⁹ Deep packet inspection (DPI) involves examining the content of a packet – the actual data the packet carries – in addition to the packet header that contains the routing information that directs the packet to its destination. In other words, DPI involves examining the contents of a Web browsing session, email, instant message, or whatever other data the packet contains. The Commission has received considerable input from parties on this issue. *See Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Secretly Degrading Peer-to-Peer Applications; Broadband Industry Practices Petition of Free Press et al. for Declaratory Ruling that Degrading an Internet Application Violates the FCC's Internet Policy Statement and Does Not Meet an Exception for "Reasonable Network Management,"* File No. EB-08-IH-1518, WC Docket No. 07-52, Memorandum Opinion and Order, 23 FCC Rcd 13028 (2008); *Broadband Industry Practices*, WC Docket No. 07-52, Notice of Inquiry, 22 FCC Rcd 7894 (2007); *Petition to Establish Rules Governing Network Management Practices by Broadband Network Operators of Vuze, Inc.*, WC Docket No. 07-52 (filed Nov. 14, 2007).

⁹⁰ *Internet Policy Statement*, 20 FCC Rcd at 14988, para. 4.

⁹¹ Section 706 of the Act, among other things, directs the Commission to encourage the deployment of advanced telecommunications capability to all Americans by using measures that "promote competition in the local telecommunications market." 47 U.S.C. § 157 nt.

⁹² *See Consumer Protection in the Broadband Era*, 20 FCC Rcd at 14903, para. 148.

⁹³ The Commission has already used this authority to address customer privacy concerns related to broadband-enabled voice services. *See, e.g., Implementation of the Telecommunications Act of 1996: Telecommunications Carriers' Use of Customer Proprietary Network Information and Other Customer Information; IP-Enabled Services*, CC Docket No. 96-115, WC Docket No. 04-36, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 6927, 6954-57, paras. 54-59 (2007) (exercising

(continued....)

E. Status of Deployment

1. Subscribership Data and Mapping

61. The Recovery Act requires the Commission to develop a national broadband plan that includes “an evaluation of the status of deployment of broadband service, including progress of projects supported by the grants made pursuant to this section.”⁹⁴ We note that the Commission recently revised its Form 477 collection of data regarding broadband subscribership. In particular, the Commission is beginning to collect broadband subscribership data at the Census Tract level, including data on the number of subscribers using different technologies, and at various upload and download speeds.⁹⁵ We seek comment on how the Commission can use these data to report on the status of broadband deployment, including any benefits and limitations inherent in these data. We also seek comment on how additional measures, such as broadband availability data and mapping, would help the Commission to accurately assess the status of broadband deployment.⁹⁶ For example, does measurement by Census Tract adequately capture deployment on tribal lands, or in rural areas?⁹⁷ Also with regard to availability, to what extent have local exchange carriers comprehensively inventoried their loop plant to the service address level to know whether their lines are capable of providing acceptable DSL service? Likewise, we seek comment on other types of data, including pricing data that could further assist the Commission in reporting to the public on the availability of broadband services.⁹⁸ Further, we seek comment on whether the Commission should collect data on broadband use supported through universal service programs. If so, how should these data be collected and used? How would the availability of additional data improve efforts to accomplish our broadband goals? (III 61., The Commission must first determine the granularity needed to define availability, access and affordability. When using census tract data, what is acceptable? What percentage of households, businesses, non-profits. Schools, governments will be deemed necessary to say that broadband is available (wires going passed their entity)? Does all really mean all or has it other meanings based on a qualification of the data in question? The determination of how granular the data must be and how to achieve such granularity will determine the scope of the data developed.)

2. Stimulus Grant and Loan Programs

62. Recent legislation has created several opportunities for organizations seeking to build out broadband infrastructure and services to unserved and underserved areas to receive grants and loans to help defray the cost of deployment, among other things.⁹⁹ The Recovery Act provides funding for broadband programs at RUS and NTIA. We seek comment on how the

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ancillary jurisdiction under Title I to extend the CPNI obligations of section 222 of the Communications Act to interconnected VoIP providers).

⁹⁴ Recovery Act § 6001(k)(2)(C).

⁹⁵ See *infra* App., para. **Error! Reference source not found..** Mobile wireless broadband providers are required to report their total number of subscribers in each state and provide a list of Census Tracts where their broadband service is available.

⁹⁶ See BDIA § 103; see *infra* App., paras. **Error! Reference source not found., Error! Reference source not found., Error! Reference source not found..**

⁹⁷ Government Accountability Office, *Telecommunications: Broadband Deployment Is Extensive throughout the United States, but It Is Difficult to Assess the Extent of Deployment Gaps in Rural Areas*, GAO-06-426 (May 2006).

⁹⁸ See *infra* App., para. **Error! Reference source not found. & n.Error! Bookmark not defined..**

⁹⁹ See Food, Conservation, and Energy Act of 2008, Pub. L. No. 110-246, 122 Stat. 923 § 6110 (2008 Farm Bill); Recovery Act RUS Appropriations; Recovery Act NTIA Appropriations; see also *infra* App., para. **Error! Reference source not found..**

programs in the Recovery Act should be considered as the Commission develops a national broadband plan. We also seek comment on how we would obtain data regarding the success of these programs. We note that the Recovery Act includes requirements that all grantees report quarterly to NTIA information on the use of grant funding and progress toward fulfilling the objectives of the award.¹⁰⁰ We also note that agencies must make broadband applicant information available on their websites.¹⁰¹ Further, the Department of Agriculture must submit information to Congress regarding the RUS grants and loans provided under the Recovery Act. We seek comment on how the Commission can best access that information for purposes of implementing a national broadband plan. In particular, we seek comment on whether the information regarding the grants the Commission must monitor are limited to the NTIA grants, given that the RUS grants are located in a different section of the Recovery Act. Finally, we seek comment on how the Commission might work with NTIA to ensure that the Broadband Technology Opportunities Program (BTOP), including requirements like the nondiscrimination and network interconnection provisions, operates in an effective and efficient manner under a national broadband plan. (III 62., The Commission should work with the states in cooperation with NTIA, RUS and any other entity to monitor grants and loans under the Recovery Act. The regional offices of the federal agencies involved as well as state designated entities. State and limited regional entities could be melded and should follow the accepted state plan so as not to duplicate programs. All should fit into what could become the national plan.)

F. Specific Policy Goals of the National Broadband Plan

63. The Recovery Act requires the Commission to develop a national broadband plan that includes “a plan for the use of broadband infrastructure and services in advancing” a series of public policy goals.¹⁰² We seek comment on how to interpret this requirement and how the Commission should implement this in its development of a national broadband plan. Below, we seek comment more specifically on each of the policy goals in the order in which they are enumerated in the Recovery Act. (III 63., See 62 above.)

1. Advancing Consumer Welfare

64. In the development of a national broadband plan, the Recovery Act requires that the Commission include “a plan for the use of broadband infrastructure and services in advancing consumer welfare.”¹⁰³ We seek comment on how to interpret and implement this directive, including an analysis of existing Commission policies, programs, and proposals for advancing consumer welfare through the use of broadband infrastructure and services. (III 64., Consumer welfare can be promoted and advanced but on if they are onboard and on the network. They must also be knowledgeable on its usage, benefits and drawbacks. Access must be affordable and consumers must be assured to the extent possible of the privacy of their data used.)

65. Consumer welfare has been an important consideration in recent Commission

¹⁰⁰ Recovery Act § 6001(i).

¹⁰¹ Specifically, the Recovery Act requires that NTIA “create and maintain a fully searchable database, accessible on the Internet at no cost to the public, that contains at least a list of each entity that has applied for a grant under this section, a description of each application, the status of each such application, the name of each entity receiving funds made available pursuant to this section, the purpose for which such entity is receiving such funds, each quarterly report submitted by the entity pursuant to this section, and such other information sufficient to allow the public to understand and monitor grants awarded under the program.” Recovery Act § 6001(i)(5). See Office of Management and Budget, “Initial Implementing Guidance for the American Recovery and Reinvestment Act of 2009,” Memorandum, M-09-10 (Feb. 18, 2009).

¹⁰² Recovery Act § 6001(k)(2)(D); see *supra* note 15 (listing the policy goals enumerated in the Recovery Act).

¹⁰³ Recovery Act § 6001(k)(2)(D).

broadband decisions. Among other actions taken to protect consumers, the Commission has issued an *Internet Policy Statement* defining rights consumers should have when they access the Internet regardless of what service provider they choose,¹⁰⁴ and enforcing these policies when they have been ignored by service providers.¹⁰⁵ The Commission also currently is considering additional consumer protection rules proposed in the *Consumer Protection in the Broadband Era NPRM*, which sought comment on the need for any non-economic regulatory requirements necessary to ensure that consumer protection needs are met by all providers of broadband Internet access service, regardless of the underlying technology.¹⁰⁶ We seek comment on how to incorporate both the consumer rights addressed in these proceedings, and the providers' network and facilities management practices for prioritizing service and bandwidth into a broader, nationwide plan for broadband development.¹⁰⁷ (III 65., Equality and non discrimination must be the hallmarks of the plan. Regulation insuring the privacy of the data used must be included. All information must be served on a non-discrimination and equal footing.)

66. We request comment specifically on the role that privacy protections can play in enhancing consumer welfare. If consumers feel secure that they can calibrate the privacy level of their broadband communications, are they more likely to experience the benefits associated with broadband use? What is the role of applications providers in guarding privacy so as to encourage greater use of broadband-enabled services such as photo sharing, online tax filing and bill payment, remote data storage, social networking, and others? Do data retention policies and fears that digital records are "permanent" inhibit use of broadband technologies? (III 66., We must insure that data communication stays with the individuals sharing and utilizing the data. It must not be shared with any other entity except for law enforcement purposed or under such circumstances as necessary for health and safety and only with those particular entities. All such data must remain the property of the individuals and entities that produced the data.)

67. We ask for comment generally on how advances in technology are helping to advance consumer welfare. We seek comment on what applications are emerging or may emerge in the future that will advance consumer welfare and what their network requirements will be. As Internet and computing security issues consume a great deal of resources by consumers of all types, how should the Commission take security issues into account as it develops a national broadband plan? Additionally, we seek comment on how consumers understand the dependability of broadband services and if there are ways to improve consumer understanding of the benefits and limitations of their services. Would consumer welfare be enhanced by more disclosures to customers of any limitations that providers place on broadband services, including limitations that may be placed on service on a temporary or intermittent basis, to deal with network congestion or for other reasons?(III 67., Limitations on use by consumers should be a last resort if there is network congestion. Security issues while important must not interfere with usage and should be utilized as much as possible so as not to interfere with consumer use.)

68. What aspects of broadband policy have improved consumer welfare, promoted competition, and led to technological innovation? Are there negative aspects of broadband that should be considered when assessing consumer welfare? How can these aspects be minimized while maximizing the potential benefits? (III 68., Expanded and expanding the use of broadband for all segments of society has led to technological innovation and should be encouraged. Consumer use of data should not come with industry's ability to monitor and infringe on the consumers' choice of rejecting a industry's desire to impose its view on the consumer.)

¹⁰⁴ *Internet Policy Statement*, 20 FCC Rcd at 14987-88, para. 4. For a discussion of open network policies, see *supra* Section III.C.5.

¹⁰⁵ See *Comcast Order*, 23 FCC Rcd 13028.

¹⁰⁶ *Consumer Protection in the Broadband Era NPRM*, 20 FCC Rcd 14853.

¹⁰⁷ Recovery Act § 6001(k)(2)(d).

69. We seek comment on the interplay between consumer welfare and the market generally. Where does market competition for broadband customers fall short of providing sufficient consumer safeguards and where must the government step in to ensure that consumers are being properly protected? How can the government maximize the efficiency of its consumer protection regulations? We also seek comment on how the Commission and other agencies should evaluate consumer protections for broadband and broadband-enabled services in ongoing reviews,¹⁰⁸ and we seek comment on how the Commission's plan will consider developments in the regulation and classification of broadband services.¹⁰⁹ (III 69., The players in the market do not take into consideration the needs and desires of most consumers. They infringe on privacy and interfere with consumers' ability to reject specific types of information even when requested to do so. The Commission must create rules to insure that consumers are protected from unwanted information.)

2. Civic Participation

70. The Commission is also instructed to formulate "a plan for use of broadband infrastructure and services in advancing . . . civic participation."¹¹⁰ We seek comment on how to interpret and implement this portion of the Recovery Act. We also seek comment on how the goals of open and accessible government aimed at increasing public awareness and participation in government can be amplified by access to broadband. For example, what are new uses of broadband that would further open government and civic participation? How do new media, including social networking tools, advance civic participation, and are there limitations or concerns associated with such use? There is a constant push towards greater transparency in government, including innovative methods for direct public access to government and participation in decision making. We seek comment on how broadband infrastructure and services can improve citizen access to local and national news, information, dialogue with government and other citizens, transactional efficiency, and participation in governance. What are the positive and negative consequences of such disintermediation? (III 70., Civic participation can be enhanced through the use of the internet and broadband development. Access to information on government must be transparent and fully accessible, but care must be taken that internet and broadband access does not supplant other methods of information and contact. As an example, many companies seek employees insist that resumes and information be sent **only** through the internet, thereby excluding those who are not comfortable or do not have access to such services.)

71. We also seek comment on how broadband infrastructure and services enable amateur content creation and distribution. For example, does access to broadband increase the ability of the average citizen to make her voice heard by the government and other citizens, and if so, how can this be advanced? Similarly, we seek comment on the benefits of video streaming or video conferencing of government meetings to enable participation by those who cannot attend a meeting in person (because of distance, cost, disability, illness, and the like). Are there other

¹⁰⁸ See, e.g., *Consumer Protection in the Broadband Era NPRM*, 20 FCC Rcd 14853 (2005).

¹⁰⁹ See *Wireline Broadband Order*, 20 FCC Rcd 14853 (2005); see also *National Cable & Telecommunications Ass'n v. Brand X Internet Services*, 125 S. Ct. 2688 (2005) (*NCTA v. Brand X*), *aff'g* *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities, Internet Over Cable Declaratory Ruling, Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, GN Docket No. 00-185, CS Docket No. 02-52, Declaratory Ruling and Notice of Proposed Rulemaking, 17 FCC Rcd 4798 (2002) (*Cable Modem Declaratory Ruling and NPRM*); *Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks*, WT Docket No. 07-53, Declaratory Ruling, 22 FCC Rcd 5901 (2007); *United Power Line Council's Petition for Declaratory Ruling Regarding the Classification of Broadband over Power Line Internet Access Service as an Information Service*, WC Docket No. 06-10, Memorandum Opinion and Order, 21 FCC Rcd 13281 (2006) (*BPL Order*).

¹¹⁰ Recovery Act § 6001(k)(2)(D).

applications of broadband technology that can improve civic participation and how can they be encouraged? (III 71., Any and all methods of communicating information must be available. But in the context of participation care must be taken to insure that it is heard and not just filed in a digital folder.)

3. Public Safety and Homeland Security

72. In the development of a national broadband plan, the Recovery Act requires that the Commission include “a plan for the use of broadband infrastructure and services in advancing . . . public safety and homeland security.”¹¹¹ We seek comment on how to interpret and implement this directive, including an analysis of existing policies and programs that are on point. We seek comment on how to identify which broadband services are most needed to advance public safety and homeland security. For example, should the Commission focus on broadband high-speed Internet connectivity for public safety and homeland security needs? How should the broadband infrastructure be designed in order to support both the needs of the public for connectivity to the global Internet and the needs of emergency services for connectivity to a restricted, private IP infrastructure? We seek comment on how advancing public safety and homeland security is interrelated with improvements in telehealth and telemedicine delivery through broadband. We also seek comment on how access to broadband capability may promote interoperable wireless-based communications among various public safety agencies and jurisdictions, as well as plans and benchmarks to improve interoperability. Similarly, we seek comment on how access to broadband capability in general and specific broadband services in particular will ensure that broadband-based applications and support systems (over any broadband transport platform) are compatible among different public safety agencies. (III 72., Technical issue left to experts)

73. We seek comment on whether and to what extent the national broadband plan should address means to protect and advance cybersecurity, specifically with respect to those broadband networks critical to the nation's critical infrastructure, financial institutions, public safety and homeland security. If so, what steps should be taken to secure the nation's most vulnerable broadband facilities and data transfers from cyber threats, such as espionage, disruption, and denial of service attacks? Should certain broadband service providers and operators adhere to specific standards or best practices to minimize such threats? Should the Commission adopt a process whereby communications providers can certify their compliance with specific standards and best practices? What agency or organization within the government is best positioned to take the lead inter-agency coordination role for protecting against and responding to cyber security attacks? (III 73., See 72 above)

74. We seek comment on any special concerns about ensuring physical diversity or redundancy in public safety and critical infrastructure industry networks and how to track and measure these factors. We seek comment on these issues with respect to commercial networks, as used by public safety entities for emergency communications. We also seek comment on strategies for improving network redundancy and hardening network assets. (III 74., See 72 above.)

75. We seek comment on how developments in broadband technologies and broadband-enabled services impact public safety and homeland security goals. Specifically, in preparing a national broadband plan, how should the Commission take into account the advent of advanced commercial wireless broadband technologies, such as LTE and WiMAX? Are “off-the-shelf” solutions sufficient? Why or why not? What broadband policies would best promote the deployment of next generation 911 (NG 911) networks, including emergency services IP networks? How might the results of NTIA’s obligation under the NET 911 Act to develop an NG 911 migration plan assist with ensuring access to broadband service by public safety answering

¹¹¹ Recovery Act § 6001(k)(2)(D).

points (PSAPs) and establishing appropriate benchmarks?¹¹² (III 75., See 72 above.)

76. We seek comment on how the public safety, homeland security, and health care communities envision using broadband both near-term and in the future. Specifically, what features are most important: live video; data transfer; web access; IP-based voice; security and encryption; mission critical or emergency use; virtual private networks; deployable systems for special events, disasters, and pandemics? What are the costs to public safety entities of obtaining broadband service (whether commercial or self-provisioned), devices, and applications, and what sources of funding are available? Are there opportunities for pooling resources, such as shared infrastructure? What models, such as statewide networks, have been tried and shown successes or limitations? What broadband networks exist or are planned? How are public safety entities currently utilizing or planning to utilize commercial broadband networks to carry out their missions? Are such networks used for “mission critical” communications? Are there accommodations that commercial carriers have made for public safety users, such as increased geographic coverage, back-up power or hardening of facilities against weather or terrorist events, enhanced security, or enterprise customer discounts? At what cost? What limitations are public safety entities encountering with respect to commercial broadband networks, and what needs are going unmet by commercial offerings? We seek comment on how to achieve economies of network resource sharing by public safety, where there is “a dedicated broadband network that connects health care providers in a state or region.”¹¹³ (III 76., See 72 Above.)

77. The Commission has previously found that wireless broadband services will play an essential role in the ability of public safety entities, especially first responders, to fulfill their mission to protect the health, welfare and property of the public.¹¹⁴ What role should existing fixed and mobile spectrum allocations, which are able to support public safety broadband deployments, have in the development of a national broadband plan? Specifically, how can the 4.9 GHz band meet the broadband needs of the public safety community? In developing the national broadband plan, what is the interplay with our current rulemaking addressing public safety services in the 700 MHz band? For example, in a separate proceeding, the Commission is seeking comment on how to promote the development of a nationwide, interoperable broadband network for the nation’s first responders.¹¹⁵ What additional steps should the Commission take

¹¹² See 47 U.S.C. § 942(d); see also New and Emerging Technologies 911 Improvement Act of 2008, Pub. L. No. 110-283, 122 Stat. 2620 (2008).

¹¹³ *Rural Health Care Support Mechanism*, WC Docket No. 02-60, Order, 21 FCC Rcd 11111, para. 3 (2006) (*2006 Rural Healthcare Pilot Program Order*) (“Under this pilot program, all public and non-profit health care providers may apply for funding to construct a dedicated broadband network that connects health care providers in a state or region.”).

¹¹⁴ *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands; Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Section 68.4(a) of the Commission’s Rules Governing Hearing Aid-Compatible Telephones; Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services; Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission’s Rules; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band; Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010; Declaratory Ruling on Reporting Requirement under Commission’s Part 1 Anti-Collusion Rule*, WT Docket Nos. 06-150, 01-309, 03-264, 06-169, 96-86, 07-166, CC Docket No. 94- 102, PS Docket No. 06-229, Second Report and Order, 22 FCC Rcd 15289, 15407-08, para. 325 (2007) (*Second Report and Order*).

¹¹⁵ See *Service Rules for the 698-746, 747-762 and 777-792 Bands; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band*, WT Docket No. 06-150, PS Docket No. 06-229, Second Further Notice of Proposed Rulemaking, 23 FCC Rcd 8047 (2008) (*Second Further Notice*); *Service Rules for the 698-746, 747-762 and 777-792 Bands; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band*, WT Docket No. 06-150, PS

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with regard to other spectrum bands available for public safety use, such as the 4.9 GHz band, in order to help meet the broadband needs of the public safety community? What special considerations, concerns or limitations should be taken into account specifically with respect to public safety broadband deployments in rural areas? (III 77., See 72 Above.)

78. In the instant proceeding, we seek comment on what part, if any, the development of an interoperable public safety broadband network should play in the overall plan for the use of broadband infrastructure and services in advancing public safety and homeland security. We seek comment on whether there are programs at other agencies that should be considered as a part of the national broadband plan. We also seek comment on what lessons the Commission can incorporate from its existing policy roles impacting public safety and homeland security.¹¹⁶ Finally, we seek comment on how plans and efforts to advance public safety and homeland security should be coordinated between and among the various federal, tribal, state, and local entities. (III 78., See 72 above.)

79. The prospect of a pandemic outbreak or act of bioterrorism raises the potential for radically shifting network traffic patterns. A likely result of a pandemic or bioterrorism threat is a large surge in citizens telecommuting from their homes or other locations rather than from their typical work sites. Could such a shift in broadband use from the workplace to the home trigger significant congestion and delays in the flow of data over broadband networks, particularly at the enterprise and residential Internet access levels? Should a plan for access to broadband capability address this possibility, and if so, how? For example, in such an event, would traffic prioritization schemes be necessary to maintain the flow of data essential to the nation's economy, public health, and defense? We seek comment on whether the national broadband plan should include a prioritization scheme to account for pandemic and bioterrorism threats. If so, which agencies should have the authority and responsibility for setting priorities, and how should these priorities be established and enforced? For example, should traffic be prioritized by traffic type, by destination, or by some other qualifier? (III 79., See 72 above.)

4. Community Development

80. The Recovery Act directs the Commission to include in its national broadband plan “a plan for use of broadband infrastructure and services in advancing . . . community development.”¹¹⁷ We seek comment on the interpretation and implementation of this portion of the Act. While one of the benefits of broadband is the ability to connect more efficiently with the global community, we seek comment on how it could be used for developing local communities. For example, how could a local community use broadband Internet access to identify local problems and enhance methods for solving those problems? Does or can broadband be used to help develop local resources, assess the needs of the local community, and foster cooperation and

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Docket No. 06-229, Third Further Notice of Proposed Rulemaking, 23 FCC Rcd 14301 (2008) (*Third Further Notice*).

¹¹⁶ For instance, there are public safety elements of the Rural Health Care Pilot Program in which participants are to coordinate the use of their health care networks with HHS and, in particular, with its Centers for Disease Control and Prevention (CDC) in instances of national, regional, or local public health emergencies (e.g., pandemics, bioterrorism). *Rural Health Care Support Mechanism*, WC Docket No. 02-60, Order, 22 FCC Rcd 20360, 20402-03, paras. 81-82 (2007) (*RHC Pilot Selection Order*). Pilot Program participants must also submit quarterly reports providing detail on how their supported networks have complied with this directive. *Id.* at 20423-24, 20434, paras. 126-29, App. D. Additionally, when there is a natural disaster, the Commission often receives requests for additional funding from the E-rate program for infrastructure that has been destroyed. We seek comment on whether funding from the E-rate program should be used to upgrade – and possibly provide greater broadband access – beyond what insurance will replace.

¹¹⁷ Recovery Act § 6001(k)(2)(D).

volunteerism on a local level? How can broadband be used as a resource for economic development in communities across America? How could broadband be used to provide communities with local news and information? How can the universal service High-Cost, Low-Income, Rural Health Care, and Schools and Libraries programs be modified to encourage community broadband development? What other local social goals may be impacted positively by broadband, and how could broadband access be used to further those goals? (III 80., The use of broadband throughout a community can serve as a catalyst for increasing dialogue within and between communities. But government must adhere to principals of openness when dealing with its constituents. The use of the internet can cut down on paperwork and time in granting of licenses, etc. Meetings held on line via teleconferencing and other methods can shorten wait times, etc. There are many instances today in which broadband is used in hospitals, schools, and libraries, etc. These can be expanded and improved upon with the use of new technologies. There must be a commitment to expanded use of these technologies so that all can participate.)

5. Health Care Delivery

81. The Recovery Act directs the Commission to include in its national broadband plan “a plan for use of broadband infrastructure and services in advancing . . . health care delivery.”¹¹⁸ We seek comment on how to interpret and implement this portion of the Act. (III 81., The use of on line technologies can bring the benefits of health care especially to rural and other unserved and underserved area. Faster and more comprehensive health care can enhance outcomes in this area. Health records if properly secured to protect individual privacy could substantially cut down on medical errors to benefit consumers.)

82. Electronic medical records are an important aspect of modernizing our healthcare system and stimulating our economy. Federal agencies are actively working to develop interoperable Health IT standards.¹¹⁹ We seek comment generally on the interaction between broadband development and improved access to medical records and healthcare. For example, how can broadband infrastructure and services be used to develop more efficient, effective, and secure access to medical records? We also seek comment on ways to advance broadband networks that are consistent with the Health IT standards set by HHS to support and promote the NHIN. (III 80., Electronic health records can be a positive advance in health care. Privacy concerns must be in the front and center in this areas. Another issue is the number and amount of different places that such records are kept and how far back one needs to go to make sure that the on line record is comprehensive and has the type and kind of information necessary to treat patients.)

83. Consistent with the Health IT policy goals outlined above, in 2006 the Commission initiated a rural healthcare program supported by universal service funds.¹²⁰ The Rural Health Care Pilot Program supports up to 85 percent of eligible costs of designing, installing, operating and maintaining a broadband health care network that is available to eligible

¹¹⁸ Recovery Act § 6001(k)(2)(D).

¹¹⁹ In 2004, President Bush issued an Executive Order calling for the development and implementation of a national interoperable health information technology infrastructure. A key element of the 2004 Executive Order’s interoperable health information technology infrastructure plan is the National Health Information Network (NHIN) plan which promotes a “network of networks” where state and regional health information exchanges and other networks that provide health information services work together, through common architecture (services, standards, and requirements), processes and policies to securely exchange information. Letter from Robert M. Kolodner, MD, National Coordinator for Health Information Technology, to Chairman Kevin J. Martin, FCC, WC Docket No. 02-60 (dated Aug. 17, 2007). As a result, HHS has worked since 2005 to define standards necessary to assure the interoperability of electronic health records.

¹²⁰ 2006 Rural Healthcare Pilot Program Order, 21 FCC Rcd 11111.

healthcare providers.¹²¹ Pilot Program participants are required, where feasible, to use Pilot Program funding in ways to ensure their funded broadband network projects are consistent with HHS's Health IT initiatives in several areas: Health IT standards; certification of electronic health records, personal health records, and networks; the NHIN architecture; the National Resource for Health Information Technology; and the PHIN.¹²² Pilot Program participants must also submit quarterly reports providing detail on how their supported networks have complied with the HHS Health IT initiatives.¹²³ (III 83., No comment.)

84. We also seek comment on how improved broadband infrastructure and services can increase the quality of medical care available to unserved and underserved parts of the country through tele-health initiatives. For example, how effective have existing efforts been and how can they be improved? To what extent would potential regulations impede or enhance development of a vibrant nationwide tele-health network? What effect would this network have on our economy and jobs? We also seek comment on ways in which Rural Health Care Pilot Program projects are advancing implementation of a national interoperable health information technology infrastructure. In doing so, we seek comment on lessons learned from the pilot and suggestions concerning how the Rural Health Care program can further this initiative. (III 84., The present tele-health program has been very successful and need to be expanded to all hospitals, clinics and other practices where feasible. There may be a need to review the program to determine if a dedicated network for health care as well as first responders and homeland security is a better way to go to insure interoperability and evenness in the system.)

85. We also seek comment on how we can continue to work with HHS and other agencies to maximize the penetration of tele-health initiatives, educate citizens on broadband and tele-health options, and generally use broadband to increase health awareness, diagnosis, and treatment. Finally, the Recovery Act requires that HHS, in consultation with other government agencies, including the Commission, conduct a study and report on the availability of open source health information technology systems.¹²⁴ We seek comment on how to consider the availability of open source health information technology systems with respect to the national broadband

¹²¹ 2006 Rural Healthcare Pilot Program Order, 21 FCC Rcd 11111; 2007 RHC Pilot Selection Order, 22 FCC Rcd 20360. In the Rural Health Care Pilot Program, the Commission, in consultation with HHS, addressed ways the Pilot Program and the NHIN can advance the provision of critical patient information to clinicians at the point of care to enable vital links for disaster preparedness and emergency response, to improve healthcare and population health, and to prevent illness and disease. 2007 RHC Pilot Selection Order, 22 FCC Rcd at 20402-03, para. 82.

¹²² 2007 RHC Pilot Selection Order, 22 FCC Rcd at 20402-03, para. 82. Participants shall use Pilot Program funding in ways that are consistent with HHS's health information technology (IT) initiatives that "provide leadership for the development and nationwide implementation of an interoperable health information technology infrastructure to improve the quality and efficiency of health care." Accordingly, where feasible, selected participants, as part of their Pilot Program network build-out projects shall: (1) use Health IT systems and products that meet interoperability standards recognized by the HHS Secretary; (2) use Health IT products certified by the Certification Commission for Healthcare Information Technology; (3) support the NHIN architecture by coordinating their activities with the organizations performing NHIN trial implementations; (4) use resources available at HHS's Agency for Healthcare Research and Quality (AHRQ) National Resource Center for Health Information Technology; (5) educate themselves concerning the Pandemic and All Hazards Preparedness Act and coordinate with the HHS Assistant Secretary for Public Response as a resource for telehealth inventory and for the implementation of other preparedness and response initiatives; and (6) use resources available through CDC's Public Health Information Network (PHIN) to facilitate interoperability with public health organizations and networks. *See id.*

¹²³ RHC Pilot Selection Order, 22 FCC Rcd at 20432-44, App. D. Quarterly reports are due for a 72-month period from the initial due date (July 30, 2008). *See RHC Pilot Selection Order*, 22 FCC Rcd at 20423-24, paras. 126-27.

¹²⁴ Recovery Act § 4103(b); *see* App., para. **Error! Reference source not found.** (describing this requirement).

plan, which, as stated, includes a plan for use of broadband infrastructure and services in advancing health care delivery. (III 85., A dedicated health care network that is open to all on with a minimum or no rate may be an option. It could be secure, private and open only to those who need to be on the network. Such a network would be hard to access without proper authorization and all information could be kept secure through authorized gatekeepers.)

6. Energy Independence and Efficiency

86. In the development of a national broadband plan, the Recovery Act requires that the Commission include “a plan for the use of broadband infrastructure and services in advancing . . . energy independence and efficiency.”¹²⁵ We seek comment on how to interpret and implement this directive, including an analysis of existing Commission and other agency policies, programs, and proposals designed to advance the policy goals of the Recovery Act. Federal policy and recent legislation have trended towards implementing more efficient energy distribution mechanisms. Are there broadband applications that could help to improve efficiencies in energy production, distribution or consumption, like smart grid technology?¹²⁶ In 2007, Congress set aside \$100 million per fiscal year between 2008 and 2012 for developing and implementing smart grid technologies.¹²⁷ The Recovery Act provisioned \$11 billion for the same goal.¹²⁸ We seek comment on how broadband infrastructure and services could help achieve efficient implementation of smart grid technology. Are there other organizations, such as the Department of Energy, with which the Commission should coordinate? We also seek comment on how these aspects of the national broadband plan will affect the economy and the creation of new jobs. (III 86., The question has answered itself. It will require advanced technologies to implement and a willingness of federal, state and local agencies to cooperate in order to implement the policy.)

87. How does the potential for more widespread use of teleworking based on access to broadband capability factor into our country’s energy independence and efficiency? Would the opportunity for workers to “commute” over a broadband network rather than over roads or other transportation networks have a significant effect on the amount or source of energy that we use on a regional or national level? Is there an energy conservation role for intelligent highways, which may use broadband technologies for such things as traffic control?¹²⁹ What standards and programs exist regarding energy efficiency of consumer and commercial electronics for broadband? We also seek comment generally on how broadband technology can be leveraged to make the United States more climate-friendly, and how a national broadband plan can help us achieve this goal. (III 87., Any technology that will permit people to telecommute and/or hold virtual meetings will save time and energy. Broadband technology is now being used for energy conservation and intelligent highways but to a limited degree and should be encouraged to be further developed. The hardware for these systems should be more energy efficient and the Commission should seek ways to encourage this efficiency. Less travel means more efficiency and should be encouraged.)

7. Education

¹²⁵ Recovery Act § 6001(k)(2)(D).

¹²⁶ See, e.g., Peter Slevin and Steven Mufson, *Stimulus Dollars Energize Efforts To Smarten Up the Electric Power Grid*, WASH. POST, Mar. 10, 2009, at A1.

¹²⁷ Energy Independence and Security Act of 2007, Pub. L. No. 110-140, 121 Stat. 1492 at § 1304 (2007) codified at 42 U.S.C. § 17384.

¹²⁸ Recovery Act Div. A, Title IV.

¹²⁹ See, e.g., Charles J. Murray, *Auto Industry Prepares for Intelligent Highway: Automotive experts say nothing comes close to the life-saving potential of the intelligent highway*, DESIGN NEWS, June 2, 2008, available at: http://www.designnews.com/article/46149-Auto_Industry_Prepares_for_Intelligent_Highway.php.

88. The Recovery Act directs the Commission to include in its national broadband plan “a plan for use of broadband infrastructure and services in advancing . . . education.”¹³⁰ We seek comment on how to interpret and implement this portion of the Act. (III 88., Using broadband infrastructure to bring advanced educational experiences to the population in traditional and non-traditional educational setting can be of great value. New technologies and programs designed to incorporate the high added value of the internet is a positive step forward. Students, teachers, educators and the public can now access via the internet and visit places on line as never before. But it takes a literate population with adequate hardware and software to achieve this goal. Therefore the commitment must be made to give all the necessary training and access to bring the full use of the internet to all.)

89. It has been said that education is the key to our future economic success. What role can broadband play in boosting the quality of American schools? Can the availability of broadband be used to encourage more technology partnerships between schools and businesses? In what ways does broadband access allow children and adults with disabilities to participate more fully in school and other educational activities? What is the role of this country’s libraries in marshaling broadband access to advance education? (III 89., Yes, yes and yes. But we must remember that the internet is a tool for education; it is not an end to itself. Just like pencils and paper replaced slates and chalk, or the use of film, filmstrips, records, projectors, etc.; each was essentially replaced by a new and advanced product to aid in the educational process, so to is the internet and its advanced hardware and software programming. Education is unique because individuals are unique and do not easily fit into boxes or pigeonholes. We must strive to keep education as constantly new and flexible so as to take advantage of new products and services but they can only aid in the educational process and not become education.)

90. How can a broadband plan maximize the benefits that our nation can derive from distance learning? Are the potential benefits greater in, and should our attention be focused more on, any particular scholastic level, such as grade school, middle school, high school or college? Should resources be directed more toward institutions or student locations? Does the potential to take online courses and earn a degree from a remote location increase the chances that people will earn a degree? What are the benefits of teaching media literacy to students of all ages so they can better utilize the information they receive? (III 90., Distance learning is another tool that can be used in the educational process. It can bring students and teachers from different areas together into the learning process. In schools with limited resources students from a number of schools can get together via the internet to take a class, but, care must be taken so as to develop procedures in which interaction (the heart of the process) can take place. Cooperation in research and writing can be developed via internet software programs and presentations can be developed to take in other students and educators. Media literacy, like literacy in other areas are a positive tool. This tool can be utilized at all levels of learning once students and teachers are comfortable using these tools.)

91. In recent years, broadband access has allowed schools, parents, teachers and students to communicate and share valuable information online. How many parents, teachers and students are missing out on these benefits because of a lack of computers, computer literacy, or access to broadband? What other barriers are there to bringing the benefits of broadband into the classroom, and what can be done about them? (III 91., All that do not have access. But, access must be granted by the educational facility and that facility must be open and responsive to all who request legal information and contact.)

92. The Commission’s E-rate program helps schools and libraries obtain affordable telecommunications, Internet access and internal connections by providing discounts on eligible

¹³⁰ Recovery Act § 6001(k)(2)(D).

equipment and services.¹³¹ We seek comment on how this program fits into a national broadband plan. Does the Commission need additional data on the broadband needs of schools and libraries or on the services currently being supported in order to best determine how E-rate would fit into a national plan? If so, how should these data be collected? (III 92., E-Rate programs are only one aspect in obtaining affordable communications and internet access. These programs require “eligible” entities to come up with additional funds as an initial investment. Broadband development is dynamic and changing almost on a daily basis. If funds are not available for reasonable upgrades and new equipment and services the system will in fact crumble and students, teachers and the public will be unable to take advantage of the positive effect of the internet. Data should be collected on an ongoing basis to determine if the programs being funded are in fact doing the job and should be incorporated in the initial proposals for evaluation.)

93. We also seek comment on how we can work with the Department of Education to maximize the positive impact that a national broadband plan would have on the Department of Education’s initiatives. In addition, we seek comment on how we can identify existing and planned state initiatives that use broadband to advance education and incorporate these into our preparation of a national broadband plan. (III 93., Set up working groups with the Department of Education so that information can be shared and processes and procedures can be implemented to carry out the initiatives.)

8. Worker Training

94. The Recovery Act directs the Commission to include in its national broadband plan “a plan for use of broadband infrastructure and services in advancing . . . worker training.”¹³² We seek comment on how to interpret and implement this portion of the Act. For example, how can American workers use broadband to increase their workplace effectiveness, both for training and on a daily basis? How can access to broadband be utilized by citizens; state, local, tribal, and federal governmental agencies; and educational institutions, among others, to enable worker training in preparation for employment, including when workers are laid off, between jobs, or preparing to re-enter the workforce after a number of years? We also seek comment on how we can work with the Department of Labor to maximize the positive impact that a national broadband plan would have on the Department of Labor’s initiatives. How could we work with the Department of Labor or other organizations to ensure that the American worker benefits from increased broadband access? (III 94., Development of worker training programs will be determined on workers and the type of training needed. Broadband is a tool in training/learning process and may be unique to the individual or process being used. There needs to be a cooperative process developed with stakeholders involved to make sure that all avenues are explored and utilized.)

9. Private Sector Investment

95. The Recovery Act directs the Commission to include in its national broadband plan “a plan for use of broadband infrastructure and services in advancing . . . private sector investment.”¹³³ We seek comment on how to interpret and implement this portion of the Act. For example, how can Congress or the Commission encourage private sector investment in broadband technology and services and the services and economic activity that they support? Likewise, how can Congress or the Commission encourage uses of broadband infrastructure and services that stimulate private sector investment in a variety of contexts (*e.g.*, seed programs,

¹³¹ *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Report and Order, 12 FCC Red 8776, 9002, para. 424 (1997) (*Universal Service First Report and Order*); *see also Release of the Funding Year 2009 Eligible Services List for Schools and Libraries Universal Service Mechanism*, CC Docket No. 02-6, Public Notice, FCC 08-265 (2008).

¹³² Recovery Act § 6001(k)(2)(D).

¹³³ Recovery Act § 6001(k)(2)(D).

technology hubs, unlicensed services)? Some communities have developed their own broadband projects where private sector competition has not yielded sufficient results.¹³⁴ We seek comment on the efficacy of encouraging the development of local and municipal broadband projects that compete with private enterprise. Does such public investment discourage or encourage private investment? What can we do to encourage private sector investment in broadband apart from loans and grants? (III 95., Public/private initiatives can be used when and if the private sector is convinced that their bottom line will be served and who will own and control the final product. They must be assured that their return on investment meets their overall goals as a private sector entity. In many areas these can only be achieved with significant subsidies especially in so-called high cost or limited subscribership areas. Public investment can have both a positive and negative impact on private initiatives. Cooperative efforts in some jurisdictions can be achieved. Certain sections of the project can be utilized. Public and municipal broadband investment may be the only way to achieve this goal.)

96. We seek comment on how to accurately measure private sector investment both in and as a result of broadband infrastructure and services. For example, how and from what sources should we obtain these data? Additionally, we seek comment on how to analyze the data we receive. (III 96., Private sector investment data can be obtained from the companies building the infrastructure if they can be convinced that the data will be kept proprietary and from government entities that issue permit to build the infrastructure. Surveys of consumers and businesses who ultimately use the infrastructure are also a source. Private sector investment can be tract if and when the private sector elects to partake in the stimulus program. See also Broadband Assessment GIS Study – Arizona Government Information and Technology Agency, January, 2009 <http://www.azgita.gov/>)

97. *Research and Development.* As with any other technology-based enterprise, research and development (R&D) play a key role in developing broadband infrastructure and services. Some experts have stated that the United States may have to pay a high economic price in the future for falling out of the lead in these areas.¹³⁵ As we contemplate a national broadband plan, we seek comment as to whether the change in financial markets or other global competitive factors are having an impact on the continuing development of cutting edge technologies in the United States. We seek comment on how to move our nation forward in research and development of next-generation technologies. For example, should such an effort include more government-funded research and development? Do we require more basic research? We also seek comment on how this particular economic climate should inform any efforts to stimulate R&D. (III 97., Government, college and university as well as private sector R & D is essential in moving forward in this area. All must be participants in this endeavor.)

10. Entrepreneurial Activity

98. The Recovery Act directs the Commission to include in its national broadband plan “a plan for use of broadband infrastructure and services in advancing . . . entrepreneurial activity.”¹³⁶ We seek comment on how to interpret and implement this portion of the Act. For

¹³⁴ For example, a number of municipalities have undertaken projects to bring high-speed broadband to their citizens. See, e.g., Marguerite Reardon, “Lafayette, La., finally gets its fiber network,” CNET NEWS, Feb. 6, 2009 available at http://news.cnet.com/8301-11386_3-10158583-76.html (Lafayette, Louisiana fiber network); W. David Gardner, “Vermont Municipal Fiber Network Is On The Road To Profitability,” INFORMATIONWEEK, Sept. 26, 2007, available at <http://www.informationweek.com/news/telecom/showArticle.jhtml?articleID=202102007> (Burlington, Vermont fiber network).

¹³⁵ See, e.g., Richard J. Newman, *Can America Keep Up?*, U.S. NEWS AND WORLD REPORT, Mar. 27, 2006, available at <http://www.usnews.com/usnews/biztech/articles/060327/27global.htm> (arguing that many of the breakthroughs in technology are no longer happening in America).

¹³⁶ Recovery Act § 6001(k)(2)(D).

example, web-based entrepreneurial ventures abound. We seek comment on how increased access to broadband would either improve existing ventures or create new ones. How does widespread broadband access impact traditional entrepreneurship? Could potential access to widely dispersed resources and workers over a broadband network change the likelihood of success? Could the success rate of small businesses be improved as a result of a national broadband plan? (III 98., This question answers itself.)

99. In the 700 MHz auction, the Commission adopted a requirement for licensees in the 700 MHz Upper C Block to provide an open platform for devices and applications, subject to certain conditions, a move that was supported by a coalition of entrepreneurs.¹³⁷ We seek comment on whether additional open platform or open network regulations, including expansion of the 700 MHz C Block regulation to other wireless spectrum, would stimulate or harm the development of new and innovative services previously ignored by incumbent carriers and providers. Commenters should include estimates of the positive and negative effects of such regulations on the economy and job creation. (III 99., Technical question. Suffice to say that networks need to be open so as to provide the widest acceptance of new and improved technologies.)

100. We also seek comment on how we can work better with the Small Business Administration to maximize the positive impact that a national broadband plan would have on the Small Business Administration's initiatives. (The more people and entities that are on the network the more valuable the net becomes. The Broadband plan must develop the plan to include these entities.) (III 100., Left blank.)

101. *Diversity in Ownership.* In section 257 of the Communications Act, Congress tasked the Commission to eliminate market entry barriers for entrepreneurs and other small businesses in the provision of services such as broadband information services, and to promote the policies and purposes of the Act favoring, among other things, a diversity of media voices.¹³⁸ Further, section 309(j)(3)(B) of the Communications Act requires the Commission to promote various objectives such as "ensuring that new and innovative technologies are accessible to the American people" by disseminating licenses to "members of minority groups and women."¹³⁹ We seek comment on how the national broadband plan can incorporate these objectives, particularly participation in the broadband industry by new entrants and small businesses, including minority and women-owned businesses. What are the barriers to entry for such entities, and what are the ways to encourage diversity in the provision of broadband services? We invite commenters to propose mechanisms that they believe would better advance our goals of promoting diversity and new entry in development and deployment of broadband networks. (III 101., Keep the networks open and treat all entities equally.)

11. Job Creation and Economic Growth

102. In the development of a national broadband plan, the Recovery Act requires that the Commission include "a plan for the use of broadband infrastructure and services in advancing

¹³⁷ *Service Rules for the 698-746, 747-762, and 777-792 Bands; Implementing a Nationwide Broadband Interoperable Public Safety Network in the 700MHz Band*, WT Docket No. 06-150, PS Docket No. 06-229, Second Report and Order, 22 FCC Rcd 15289, 15358-74, paras. 184-230 (2007).

¹³⁸ 47 U.S.C. § 257(a), (b).

¹³⁹ 47 U.S.C. § 309(j)(3)(B) (requiring the Commission to promote various objectives such as "ensuring that new and innovative technologies are accessible to the American people" by disseminating licenses to "members of minority groups and women"). *Turner Broadcasting Sys. v. FCC*, 512 U.S. 622, 663-64 (1994) ("*Turner I*") (quoting *United States v. Midwest Video*, 406 U.S. 649, 668 n.27 (1972) (plurality opinion) and *Associated Press v. United States*, 326 U.S. 1, 20 (1945)) (stating that "it has long been a basic tenet of national communications policy that the widest dissemination of information from diverse and antagonistic sources is essential to the welfare of the public.").

... job creation and economic growth.”¹⁴⁰ We seek comment generally on how to interpret and implement this directive, including an analysis of existing Commission and other agency policies, programs, and proposals designed to advance the policy goals of the Recovery Act. For example, how should we evaluate the impact of the Recovery Act grant and loan programs addressing job creation in the process of broadband deployment? Further, how should the Commission consider the role of broadband as an enabling infrastructure for the creation of jobs and economic growth? Would the ability to “virtually” assemble a geographically dispersed workforce on a broadband network result in the creation of new jobs and economic growth, as well as creating opportunity for dispersed workers to compete for otherwise existing jobs? Are there particular elements of a broadband network, for example security of communications, that are essential to realizing the job creation potential of a broadband network? Are existing broadband networks and existing technologies, such as video-conferencing, sufficient to enable a dispersed workforce to assemble over a broadband network or will new technologies be required? Toward this end, how should we factor in considerations such as speed when considering the role of broadband in our economic competitiveness globally? (III 102., The broadband plan through the Recovery Act must be flexible enough to take into consideration and implement new ideas and new technologies that are not yet developed which will help in job creation and economic growth. The use of virtual offices and the ability to evaluate projects from a variety of place almost immediately will speed the completion of efforts to foster job creation and economic growth.)

103. We also seek comment on how we can work with the Department of Labor to maximize the positive economic impact a broadband development plan would have on the United States economy and the American worker. (III 103., The Commission as well as the department of labor and affected workers need to work cooperatively in evaluating as well as move forward to develop programs and processes to increase job creation and economic growth.)

12. Other National Purposes

104. The Recovery Act directs us to include in our national plan a consideration of “other national purposes” that could be advanced by broadband infrastructure and services.¹⁴¹ We seek comment on how to interpret and implement this portion of the Act. Specifically, we seek comment on other national purposes not mentioned elsewhere in this NOI, their risks and rewards, and how they could be effectuated by national broadband access. For example, in what other ways can broadband infrastructure and services stimulate economic and social development? Additionally, we seek comment on the impact that ensuring access to broadband capability for all Americans will have with respect to America’s competitiveness in the global economy. Likewise, as the Commission compares broadband deployment in the United States with multiple communities around the globe, how should we incorporate the lessons we learn into the development of our own national broadband plan? (III 104., The internet has developed numerous way to communicate locally, nationally and world wide. The Commission needs to make sure the processes and procedures that are in place are kept open to new ideas and technologies and lower any barriers to development. In tweaking the internet, we need to be open to accept these new ideas and technologies from anywhere when it fits our needs.)

105. We seek comment on whether a national broadband plan is an appropriate forum for addressing other known risks associated with Internet access.¹⁴² We seek comment on whether the Commission should address traditional malfeasance that has been exacerbated by

¹⁴⁰ Recovery Act § 6001(k)(2)(D).

¹⁴¹ Recovery Act § 6001(k)(2)(D).

¹⁴² See, e.g., *Implementation of the Child Safe Viewing Act; Examination of Parental Control Technologies for Video or Audio Programming*, MB Docket No. 09-26, Notice of Inquiry, FCC 09-14, paras. 37-43 (rel. Mar. 2, 2009) (discussing child online safety, advanced blocking technologies, and other parental empowerment tools related to the Internet).

ubiquitous access to the Internet, like online child predators and cyberbullying. We also seek comment on whether the Commission should address novel issues unique to the Internet, like the potential privacy, economic, homeland security, and other issues associated with cloud computing. (III 105., The plan should not try to address use of the internet by those who would harm others while on line. Where necessary we need to craft laws and regulations by regulators and law enforcement. Illegal use of the internet should be left to those who are trained and have the legal background and authority to act in this area.)

G. Relationship between the Recovery Act and Other Statutory Provisions

106. The Recovery Act tasks the Commission with the development of a national broadband plan, which could include everything from policies the Commission can implement within its other statutory authority to recommendations to Congress regarding proposed policies or programs to be overseen by other governmental or non-governmental entities. Accordingly, we seek comment on how the national broadband plan should account for the variety of previously existing statutory provisions that touch on broadband, and seek comment on where authority may be needed or where resources should be directed as a part of the national broadband plan the Commission will report to Congress. While discussion in this *Inquiry* often details the policies and programs at the Commission, we ask that parties not limit the scope of their comments on the national broadband plan only to programs within the policymaking authority of the Commission.¹⁴³ (III 106., Cooperation and dialogue among those entities that the Broadband Plan impacts will be necessary to implement in those areas of conflict. They need to be attended to when the conflict exists and settled in cooperation with the entities involved.)

107. We seek comment on how the Commission's development of a national broadband plan under the Recovery Act relates to other statutory provisions. As noted above, the Commission has a variety of policies and statutory directives relating to broadband, both long-standing and recent. For example, the Commission has for many years encouraged broadband deployment and promoted the public interest through policies such as universal service and competition for telephone and video services. Also, several recent Acts of Congress have required the Commission (and other agencies) to collect specific information, evaluate, provide recommendations, or report on broadband deployment. We seek comment on how these existing Commission activities and policies intersect with and can support the Commission's requirement to develop a national broadband plan. (III 107., No Comment)

108. We seek comment on the relationship between the Commission's development of a national broadband plan and the requirements Congress set forth in the BDIA. Specifically, through the BDIA, Congress recently amended reporting obligations under section 706.¹⁴⁴ We seek comment on the relationship between the amended section 706 reporting and analysis requirements and the development of a national broadband plan.¹⁴⁵ Will this information be sufficient to support the plan's "evaluation of the status of deployment of broadband service," or

¹⁴³ We ask that parties be specific about the statutory authority for programs and policies whenever possible.

¹⁴⁴ BDIA § 103.

¹⁴⁵ The Section 706 reporting requirement states, "[t]he Commission shall, within 30 months after the date of enactment of this Act, and annually thereafter, initiate a notice of inquiry concerning the availability of advanced telecommunications capability to all Americans (including, in particular, elementary and secondary schools and classrooms) and shall complete the inquiry within 180 days after its initiation. In the inquiry, the Commission shall determine whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion. If the Commission's determination is negative, it shall take immediate action to accelerate deployment of such capability by removing barriers to infrastructure investment and by promoting competition in the telecommunications market." 47 U.S.C. § 157 nt (b).

is something more required?¹⁴⁶ Similarly, we seek comment regarding how the Commission should integrate the other information collection and analysis required of the Commission in the BDIA.¹⁴⁷ For example, the BDIA tasks the Commission with cataloging “geographical areas that are not served by any provider of advanced telecommunications capability.”¹⁴⁸ (III 108., The last sentence will depend on the granularity of the information the commission seeks and if the entities providing the information give the Commission all it asks for.)

109. We also seek comment on how the broadband elements of the 2008 Farm Bill relate to the Commission’s development of a national broadband plan.¹⁴⁹ Specifically, the 2008 Farm Bill requires the Commission, in a separate proceeding, to develop “a comprehensive rural broadband strategy,” including recommendations to Congress.¹⁵⁰ We seek comment on whether and how the Commission’s comprehensive rural broadband strategy should become a part of its development of a national broadband plan. Further, we seek comment on how the Commission’s directive under the 2008 Farm Bill to identify and promote a government-wide strategy, including federal, state, regional, and local government agencies, will relate to or can be incorporated into our development of a national broadband plan. (III 109., Technical question. The Commission should seek dialogue and cooperation from the Department of Agriculture, RUS, and any other organization receiving stimulus funds to evaluate projects so that they fit into the overall broadband plan.)

110. We also seek comment on how the Communications Act and other relevant statutory provisions should inform our development of a national broadband plan. For example, in section 230(b) of the Act, Congress describes a national Internet policy. Specifically, Congress states that it is the policy of the United States “to preserve the vibrant and competitive free market that presently exists for the Internet”¹⁵¹ and “to promote the continued development of the Internet.”¹⁵² And in section 706(a) of the 1996 Act, Congress charges the Commission with “encourag[ing] the deployment on a reasonable and timely basis of advanced telecommunications capability” – broadband – “to all Americans.”¹⁵³ We seek comment on how these statutory provisions should inform our development of a national broadband plan. We also seek comment on how to consider the clause in section 706 that requires the Commission to “take immediate action to accelerate deployment of such capability by removing barriers to infrastructure investment and by promoting competition in the telecommunications market” should the Commission find deployment of advanced telecommunications capability is not being deployed to all Americans in a reasonable or timely manner.¹⁵⁴ (III 110., This questions turns on one of main reasons for the use of stimulus funds. It is the need for the broadband development plan; what is build first and by whom. The plan needs to be in place to comment.)

¹⁴⁶ Recovery Act § 6001(k)(2)(C).

¹⁴⁷ See *infra* App., paras. **Error! Reference source not found.-Error! Reference source not found.** (describing the additional reporting called for by the BDIA).

¹⁴⁸ BDIA § 103(a).

¹⁴⁹ See 2008 Farm Bill; see also *infra* App., para. **Error! Reference source not found. & n.Error! Bookmark not defined.** (describing the 2008 Farm Bill and detailing the statutory requirements for the Commission’s recommendations).

¹⁵⁰ *Id.*

¹⁵¹ 47 U.S.C. § 230(b)(2).

¹⁵² 47 U.S.C. § 230(b)(1).

¹⁵³ 47 U.S.C. § 157 nt (incorporating section 706 of the Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996)).

¹⁵⁴ 47 U.S.C. § 157 nt (b).

111. We seek comment on the ways in which section 254 of the Act defines broadband-related terms in the context of universal service and how to relate these definitions and obligations to the development of a national broadband plan. For example, the Commission is tasked with basing its universal service policies on, among other things, a policy that “[c]onsumers in all regions of the Nation . . . should have access to . . . advanced telecommunications and information services.”¹⁵⁵ Section 254 of the Act also requires the Commission to “establish competitively neutral rules . . . to enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services for all public and non-profit elementary and secondary school classrooms, health care providers, and libraries.”¹⁵⁶ (III 111., Rules covering universal service fund need to be defined so as to insure that consumers have access to broadband and reasonable prices. The concept of net neutrality must be enforced so as to afford these consumers full access to all the internet has to offer.)

H. Improving Government Performance and Coordination with Stakeholders

112. We ask parties to comment on how a coordinated effort among federal departments and agencies; tribal, state, and local governments; and interested groups and individuals may enable the nation to achieve Congress’s goal that all Americans have access to broadband. We seek comment on what specific steps each of these parties should take to ensure that all stakeholders work cooperatively toward that goal. We ask, in particular, that commenters suggest both formal and informal means of coordination, and describe the information and other systems they believe may be needed to make the coordination seamless and effective. (III 112., The Commission needs to determine what communities or groups of comities desire from the network. Only then can stakeholders working together come up with the project that best suits each community.)

113. *Coordination among Federal Departments, Agencies, and Others.* A number of federal departments and agencies, including RUS, NTIA, and the Commission, have programs aimed at increasing the deployment and use of broadband facilities, and many of these departments and agencies are tasked with substantive broadband-related obligations under the Recovery Act.¹⁵⁷ We seek comment on what specific steps these departments and agencies should take to cooperate with each other.¹⁵⁸ How, in particular, can the heads of broadband-related programs ensure that the programs are consistent with each other? What should each department and agency do to ensure that its staff has access to expertise and relevant information in other departments and agencies having responsibility for broadband initiatives? What specific steps should broadband program heads take to make staff in other departments and agencies aware of their broadband initiatives and to avoid duplication of efforts? To what extent should interagency coordination include informal staff-to-staff interactions as well as more formal contacts? (III 113., Utilizing the internet itself on a cooperative basis agencies can cooperatively meet and come to some conclusions. They can also invite other stakeholders to virtual meetings and dialogue on the best way to approach each issue. In some cases the agency may need to have face to face dialogue or bring others to the table via nearby internet areas.)

¹⁵⁵ 47 U.S.C. § 254(b)(3). Further, section 254(c) specifically requires that “[u]niversal service is an evolving level of telecommunications services . . . taking into account advances in telecommunications and information technologies and services.” 47 U.S.C. § 254(c)(1); *see supra* para. **Error! Reference source not found.**

¹⁵⁶ 47 U.S.C. § 254(h)(2).

¹⁵⁷ *See infra* App., paras. **Error! Reference source not found.**-**Error! Reference source not found.**

¹⁵⁸ *See, e.g.,* Kruger, Lennard G. and Gilroy, Angele A., Broadband Internet Access and the Digital Divide: Federal Assistance Programs, Congressional Research Service, Report No. RL30719 (Jan. 23, 2009) (tables listing federal programs related to telecommunications development and broadband access).

114. We note that broadband itself can enhance the level of coordination among, and services provided by, federal, tribal, state, and local governments. For example, the federal government's recovery.gov website provides an interactive map with links to state government websites providing information about how Recovery Act funds are being used in each state.¹⁵⁹ Feedback to the government is easily enabled at the recovery.gov website and many others at the federal, state and local level. What other ways are there that government at all levels can utilize broadband capabilities for coordination and service provision? Are there "best practices" models that we should be aware of while crafting the national broadband plan? (III 114., No Comment)

115. *Public/Private Partnerships and Cooperatives.* We recognize that public/private partnerships have historically achieved public goals in innovative ways.¹⁶⁰ We seek comment on ways in which public/private partnerships can collaborate to advance common broadband objectives. Likewise, we seek comment on cooperatives, including their successes and potential to meet the broadband needs of communities around the country. We ask how public/private partnerships should be structured to ensure that objectives are reached in a timely and efficient manner. Would such partnerships be more effective on a federal, state, local, or tribal level? We also seek comment on any past successful broadband public/private partnerships, as well as specific proposals for public/private partnerships in line with the objectives of a national broadband plan. (III 115., Already answered)

116. *Information Systems and Websites.* We seek comment on specific steps federal departments and agencies should take to improve their information systems to facilitate sharing of information among different parts of the federal government, with other governmental entities, and with the public. Is there specific technology that can be cost-effectively employed for such sharing? What interim measures should the Commission and other federal departments and agencies take in the short run to improve information sharing regarding broadband initiatives? What steps should the federal government take to develop a long-term system for information sharing among departments and agencies having broadband-related responsibilities? (III 116., Technical issue)

117. We ask whether there should be a single website that all departments and agencies tasked with implementing broadband initiatives may use to inform members of the public regarding their programs. If so, should this website expand an existing website, such as Grants.gov¹⁶¹ or cfda.gov,¹⁶² or should a new website be established for this purpose? What specific functionalities should the website have on the user side in order to make the user experience as easy as possible? Could one application feasibly address all of a user's needs while meeting other operational requirements? (III 117., Single website may have too much detail to be effective. The Commission could set up a gateway website as a starting point and point users to other websites for information they seek.)

118. We also seek comment on how the federal government can use web-based

¹⁵⁹ State Recovery Sites, <http://www.recovery.gov/?q=content/state-recovery-page> (last visited Mar. 18, 2009).

¹⁶⁰ See, e.g., UNITED STATES DEP'T OF TRANS., REPORT TO CONGRESS ON PUBLIC-PRIVATE PARTNERSHIPS (Dec. 2004) (reporting on the benefit of public/private partnerships in highway construction and maintenance), available at <http://www.fhwa.dot.gov/reports/pppdec2004/>.

¹⁶¹ Grants.gov is a federal governmental website that allows individuals and organizations to find and apply for grants from various federal governmental departments and agencies. See Grants.gov, About, http://www.grants.gov/aboutgrants/about_grants_gov.jsp (last visited June 16, 2008).

¹⁶² The Catalog of Federal Domestic Assistance, available at www.cfda.gov, provides a full listing of all federal programs available to state and local governments; federally-recognized Indian tribal governments; territories (and possessions) of the United States; domestic public, quasi-public, and private profit and nonprofit organizations and institutions; specialized groups; and individuals.

systems to coordinate broadband rollout with tribal, state, and local governments and other interested groups and individuals. We ask how these systems may be made accessible to individuals with disabilities. We also ask whether we should develop other systems specifically to assist individuals and organizations that lack broadband access. (III 118., Yes)

119. *Case Workers.* There are a variety of broadband grant and loan initiatives administered by numerous agencies. Some have suggested a benefit stemming from a single point of contact within the government. We ask whether each potential grant or loan applicant should be assigned a case worker to help sort through the various broadband programs to determine which would be the most likely to meet the applicant's needs, and to assist in the application process and provide further guidance in the event the applicant receives a grant or loan. Such a program could be patterned after the program the Army has developed to assist patients at Walter Reed Army Medical Center.¹⁶³ We seek specific input regarding the details of how a case worker system would operate in an environment where a single applicant might need to interface with multiple agencies. In particular, should a case worker, in addition to assisting a grant or loan applicant, serve as a central point of contact for federal government staff and other interested parties to obtain information regarding the applicant and the status of each grant or loan for which the applicant has applied? If so, should the case worker have access to confidential information regarding the applicant and be able to share that information with the federal agency personnel responsible for processing a grant or loan application pending in another agency? (This could work if the case worker is knowledgeable and has access to the system. (III 119., The case worker must be the advocate for the project and have the authority to move the project forward.)

120. *Confidential Information.* We ask the parties to address the extent to which federal departments and agencies will obtain confidential information in the course of discharging their broadband-related responsibilities. We invite comment on what confidentiality laws or rules might be implicated by the exchange of information among federal departments and agencies, and between those departments and other governmental entities, non-governmental organizations, and individuals. Should employees at one agency have access to otherwise confidential information held by another agency when that information may be relevant to the first agency's performance of its broadband-related responsibilities? How can the federal government best protect confidential information while complying with the Confidential Information Protection and Statistical Efficiency Act of 2002,¹⁶⁴ the Freedom of Information Act,¹⁶⁵ the Paperwork Reduction Act,¹⁶⁶ and other potentially applicable laws? (III 120., Confidential must remain just that. Sharing of this information must protect this confidentiality and such sharing must not compromise this confidentiality.)

121. We also ask what laws and regulations would apply to tribal, state, and local governments and non-governmental entities in the event they receive confidential information in connection with broadband-related initiatives? How can these entities most easily comply with applicable statutes and rules, and what can the government do—beyond its current procedures—to help tribal, state, and local governments and non-governmental entities secure confidential information? Suggestions should account for electronic and interpersonal exchanges, as well as electronic and non-electronic data storage. (III 121., Technical issue.)

122. *Data Sharing.* In creating a national broadband plan, the Commission is given the opportunity to access all of the BDIA data procured by other government agencies in their

¹⁶³ See Janet Boivin, R.N., *Update: Nurse's Help Heal Walter Reed*, NURSING SPECTRUM, Apr. 28, 2007, available at <http://allnurses.com/nursing-activism-healthcare/update-nurses-help-224037.html> (last visited June 16, 2008).

¹⁶⁴ Consumer Information Protection and Statistical Efficiency Act of 2002, 44 U.S.C. § 3501 note.

¹⁶⁵ 5 U.S.C. § 552.

¹⁶⁶ See Paperwork Reduction Act, 44 U.S.C. § 3510.

compliance with the BDIA.¹⁶⁷ We seek comment on the most efficient and effective methods of acquiring these data, and whether there are any complications, such as privacy restrictions, that need to be resolved. We seek submission of studies, surveys, and reports that are relevant to the development of a national broadband plan, and are considering cataloging them for public use. We also seek comment on other potential sources of data to help us measure the nation's progress toward achieving universal broadband availability. (III 122., Left blank.)

IV. CONCLUSION

123. We recognize the gravity and scope of this forward-looking undertaking, the incredible value of ubiquitous broadband, and the difficulties that lie ahead in ensuring its availability. While bold action may be necessary, we recognize the need to approach an endeavor as vital as a national broadband plan with a spirit of collaboration, transparency, and openness. Accordingly, we seek comment on those issues discussed above, as well as any facts or issues not otherwise addressed in this NOI relating to the adoption or implementation of a national broadband plan.

Arizona Consumers Council Mission Statement

The Arizona Consumers Council is a 501(c)(4) non-profit, non-partisan, consumer advocacy group affiliated with national consumer groups including Consumer Federation of America and Consumers Union. On a per-project basis, the Council partners with consumer-based groups including AARP and Arizona PIRG. The Council lobbies for consumer interests before the Arizona Legislature and Congress, as well as other state and federal agencies.

As the top consumer watchdog in the state, Arizona Consumers Council was instrumental in the repeal of the state sales tax on food, and helped the Arizona Attorney General's office distribute rebates authorized through the Bread and Milk Price Fixing Class Action suits. Council efforts were central in establishing the Residential Utility Consumer Office (RUCO) in Arizona, the state government office that keeps residential utility prices in check. The Council was instrumental in enabling consumers to videotape movies for their own limited home use. Over the years Council efforts have saved cable television and electricity users millions of dollars.

Arizona Consumers Council has hosted and participated in consumer awareness initiatives on pertinent consumer topics including Energy Security, Identity Security and Behavioral Advertising. Arizona Consumers Council looks forward to assisting in preserving the consumer's voice regarding telecommunications in the digital age. The Council's website is <http://www.azconsumer.org>.

Albert Sterman, Vice President
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Phyllis Rowe, President Emeritus
Arizona Consumers Council

Doreen Mauro, Board Member
Arizona Consumers Council

¹⁶⁷ Recovery Act § 6001(l).

